

MECHANICAL COMPLIANCE SUMMARY

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

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Project & Applicant Information	Project Title	Todd Road - 2021 WSEC	For Building Department Use: PRCTI20250966	Date: Jul 1, 2025
	Project Address	320 Todd Road NE Puyallup, WA 98371		
	Applicant Name	Tom Rieger		
	Applicant Phone	360-226-1945		
	Applicant Email	tom@carvearch.com		
Full-Sized legible color report must be on site and made available by the Permittee for all inspections.				

Mechanical Compliance Summary Scope - Compliance verification provided in this report is limited to code minimum efficiency requirements for mechanical equipment types defined in Tables C403.3.2(1) through C403.3.2(16) of the 2021 WSEC-C. This includes efficiency multipliers for economizer exceptions. Performance criteria for additional energy efficiency and load management measures ARE NOT included in this report. Additional documentation is required to demonstrate compliance with all other provisions of the energy code, including better than code efficiency criteria for Section C406. For questions about this report, 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)	Office, Other		Building Cond. Floor Area	3,060
General Project Types	Change in Occupancy (Group R converted to Commercial)	New Building or Addition Mechanical Scope		Alteration Mechanical Scope	Single Zone Systems & Equipment	Project Cond. Floor Area	3,060
						Floors Above Grade	1
						Overall Compliance Path	General Prescriptive
Mechanical Project Description							

Mechanical Compliance Scope and Method	Project Type	Mechanical Scope	Economizer Exception(s) Applied?	DOAS Ventilation Provided?		Equipment Efficiency Compliance Verification
	Change in Occupancy	Single Zone Systems & Equipment	Yes	No		COMPLIES
Additional Energy Efficiency Measures (AEM)	No mechanical additional energy efficiency measures included in project			Load Management Measures (LDM)	No mechanical load management measures included in project	
Does building include occupancy classifications requiring DOAS?			No	Does project include DOAS equipment?		No
Based on project scope do TSPR requirements apply?			No	Do all systems comply with Appendix D standard reference design or qualify for an exception to TSPR?		No

Scope & Space Conditioning	CHANGE IN OCCUPANCY - SINGLE ZONE SYSTEMS & EQUIPMENT	Compliance Verification	COMPLIES
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Single Zone Air Systems Category - Heat pump, split & single package, SC, SDHV

Air Systems Summary Information								
System/Equip ID	Quantity of Items	Supply Airflow Control	Ventilation Standard	Ventilation CFM (Total if Multiple Items)	Ventilation Air Source	Paired with DOAS	Ventilation energy recovery	Energy Recovery Efficiency (%)
HP-1		Constant volume	IMC Natural Ventilation					
HP-2		Constant volume	IMC Natural Ventilation					
HP-4		Constant volume	IMC Natural Ventilation					
HP-3		Constant volume	IMC Natural Ventilation					

Air Systems & Equipment - Cooling											
System/Equip ID	Cooling System/Equip Type	Specific Type	Cooling Capacity per item (Btu/h)	Econo Exception Multipliers (Full/IPLV)	Required Cooling Efficiency (Code Min + Econo)	Required Part Load Efficiency (Code Min + Econo)	Proposed Cooling Efficiency	CE Units	Proposed Part Load Efficiency	PL Units	Efficiency Compliance Verification
HP-1	Heat pump, air cooled	Split system	22,000		0	13.4	0	20	SEER2	IEER	COMPLIES

HP-2	Heat pump, air cooled	Split system	48,000		0	13.4	0	23	SEER2		IEER	COMPLIES
Hp-3	Heat pump, air cooled	Split system	22,000	0	0	13.4	0	20	SEER2		IEER	COMPLIES
HP-4	Heat pump, air cooled	Split system	22,000	0	0	13.4	0	20	SEER2		IEER	COMPLIES

Air Systems & Equipment - Heating												
System /Equip ID	Heating System/Equip Type	Specific Type	Heat Pump Heating Capacity per item (Btu/h)	Cooling Capacity per Item (Btu/h) (Identical to Cooling Table)	Required Heat Pump Heating Efficiency	Required Low OSA Temp Efficiency	Proposed Heat Pump Heating Efficiency	HPH Units	Proposed Low OSA Temp Efficiency	LTH Units	Efficiency Compliance Verification	
HP-1	Heat pump, air cooled, heating	Split system	30,600	22,000	7.5	0	10	HSPF2		COP	COMPLIES	
HP-2	Heat pump, air cooled, heating	Split system	50,000	48,000	7.5	0	10.4	HSPF2		COP	COMPLIES	
Hp-3	Heat pump, air cooled, heating	Split system	30,600	22,000	7.5	0	10	HSPF2		COP	COMPLIES	
HP-4	Heat pump, air cooled, heating	Split system	30,600	22,000	7.5	0	10	HSPF2		COP	COMPLIES	

Air Systems & Equipment Details			
System/Equip ID	Discrete Area(s) Served	Location In Project Documents - Plan/Detail #	System/Equip Compliance Path
HP-1	HP-1A1, HP-1A2	M0.02, M4.01	General Prescriptive
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Economizer not required
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Heat Pumps		
	Proposed Low OSA Temp Efficiency:		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary Heat Pumps		
HP-2	HP-2A1, HP-2A2, HP-2A3	M0.02, M4.01	General Prescriptive
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Economizer not required
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Heat Pumps		
	Proposed Low OSA Temp Efficiency:		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary Heat Pumps		
HP-4	HP-4A1, HP-4A2, HP-4A3	M0.02, M4.01, M4.02	General Prescriptive
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Economizer not required
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Heat Pumps		
	Proposed Low OSA Temp Efficiency:		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary Heat Pumps		
Hp-3	HP-3A1, HP-3A2, HP-3A3	M0.02, M4.01, M4.02	General Prescriptive
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Economizer not required
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) Unitary Heat Pumps		
	Proposed Low OSA Temp Efficiency:		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary Heat Pumps		

Single Zone Equipment Category - Baseboard & wall heaters

Radiant & Passive Convection Information					
System/Equip ID	Quantity of Items	Ventilation Standard	Ventilation CFM (Total if Multiple Items)	Ventilation Air Source	Paired with DOAS
EH-1, EH-2	2	IMC Natural Ventilation			
EH-3, EH-4, EH-5, EH-6	4	IMC Natural Ventilation			

Radiant & Passive Convection Equipment - Heating				
System /Equip ID	Heating System/Equip Type	Specific Type	Heating Output Capacity per Item	HC Units
EH-1, EH-2	Wall heaters	Electric	2,000	Watts
EH-3, EH-4, EH-5, EH-6	Wall heaters	Electric	750	Watts

Equipment Details			
System/Equip ID	Discrete Area(s) Served	Location In Project Documents - Plan/Detail #	System/Equip Compliance Path

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 & Applicant Information	Project Title	Todd Road - 2021 WSEC	For Building Department Use:	Date: Jul 14, 2025
	Project Address	320 Todd Road NE Puyallup, WA 98371		
	Applicant Name	Tom Rieger		
	Applicant Phone	360-226-1945		
	Applicant Email	tom@carvearch.com		
For questions about this report, 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)	Office, Other	Building Cond. Floor Area	3,060
Project Scope	Change in Occupancy (Group R converted to Commercial)	Space Conditioning Categories	Fully Conditioned	Project Cond. Floor Area	3,060
				Floors Above Grade	1
				Compliance Method	General Prescriptive
Envelope Project Description	Remodel of existing building and small addition for change of occupancy.				

Envelope Compliance Scope and Method	Scope	Space Conditioning Category	Compliance Method	WWR/SRR per Category	UA Calculation Adjustment	Fenestration Alternates	Compliance Verification
	Change in Occupancy	Fully Conditioned	Prescriptive	10.71% / 0%	Change in occupancy allowance None selected	No alternates selected	COMPLIES

Additional Energy Efficiency (AEC) Measures Included	Enhanced envelope performance - 15% lower UA	Load Management (LDM) Measures Included	No envelope load management measure credits included in project
Air Barrier Testing	Standard building thermal envelope test	Air Barrier Comments	

Project Title	Todd Road - 2021 WSEC				Date	Jul 14, 2025
Scope & Space Conditioning	CHANGE IN OCCUPANCY - FULLY CONDITIONED				Compliance Verification	COMPLIES
Window-to-wall Ratio	10.71%	Skylight-to-roof-ratio	0%	Vertical Fenestration Alternate	No alternates selected	

Opaque Envelope Assemblies								
				Insulation R-Values				
Roof/Ceiling	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	2nd Layer (MB Roof)	U-Factor	Net Area (SF)
Attic and other	A3.20	NR2	Exterior	R-49	(< 0.04%)		U-0.021	1,590
	U-Factor Source:			U-Factor Source Description:				
	Roof Framing Type: Standard			Roof Framing Depth (Inches): 18				
	Roof Framing Spacing (OC): 24"			Roof Framing Material: Wood-framed				
	Ceiling/Attic Venting: Vented			New, upgraded or unaltered existing?: Upgraded existing assembly				
Walls	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	Insulated Wall Furring	U-Factor	Net Area (SF)
Wood-framed and other - Commercial	A3.20	NW2	Exterior	R-21	R-5 (< 0.04%)		U-0.040	3,103
	Which code target does wall comply with?: R-20 Cavity + R-3.8 CI			U-Factor Source:				
	U-Factor Source Description:			Wall Framing Type: Standard				
	Framing Depth: 2x6			Other Framing Depth:				
	Framing Spacing (OC):			New, upgraded or unaltered existing?: Upgraded existing assembly				
Floors and Edges	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)		U-Factor	Net Area (SF)
Wood-framing/joist	A3.20	NF2	Exterior	R-30	(< 0.04%)		U-0.029	1,566
	U-Factor Source:			U-Factor Source Description:				

	Floor Framing Type (Joist, Post & Beam):			Framing Depth:				
	Other Framing Depth:			Framing Spacing (OC):				
	New, upgraded or unaltered existing?: Upgraded existing assembly							
Fenestration & Opaque Door Assemblies								
				Insulation R-Values				
Vertical Fenestration	Location in Documents	Assembly ID	Assembly Location		Shading (PF)	Fenestration SHGC	Fenestration U-Factor	Rough Opening (SF)
Fixed - All other types	A4.10	W6	Exterior		PF < 0.2	SHGC-0.38	U-0.26	14
	U-Factor & SHGC Source:			U-Factor Source Description:				
	New, upgraded or unaltered existing?:							
Operable - All other types	A4.10	W1	Exterior		PF < 0.2	SHGC-0.33	U-0.28	198
	U-Factor & SHGC Source: Other U-Factor/SHGC Source			U-Factor Source Description:				
	New, upgraded or unaltered existing?: New assembly							
Operable - All other types	A4.10	W2	Exterior		PF < 0.2	SHGC-0.33	U-0.28	16
	U-Factor & SHGC Source:			U-Factor Source Description:				
	New, upgraded or unaltered existing?:							
Operable - All other types	A4.10	W3	Exterior		PF < 0.2	SHGC-0.33	U-0.28	14
	U-Factor & SHGC Source:			U-Factor Source Description:				
	New, upgraded or unaltered existing?:							
Operable - All other types	A4.10	W4	Exterior		PF < 0.2	SHGC-0.33	U-0.28	88
	U-Factor & SHGC Source:			U-Factor Source Description:				
	New, upgraded or unaltered existing?:							
Operable - All other types	A4.10	W5	Exterior		PF < 0.2	SHGC-0.33	U-0.28	2
	U-Factor & SHGC Source:			U-Factor Source Description:				
	New, upgraded or unaltered existing?:							
Glazed Doors	Location in Documents	Assembly ID	Assembly Location		Shading (PF)	Fenestration SHGC	Fenestration U-Factor	Rough Opening (SF)
Swinging entrance door	A3.11	101	Exterior		PF < 0.2	SHGC-0.33	U-0.60	22
	U-Factor & SHGC Source:			U-Factor Source Description:				
	Is this a public entrance door?: Yes			Door enclosed within a vestibule?: No vestibule				
	New, upgraded or unaltered existing?:							
Swinging entrance door	A3.10	112	Exterior		PF < 0.2	SHGC-0.33	U-0.60	18
	U-Factor & SHGC Source:			U-Factor Source Description:				
	Is this a public entrance door?: Yes			Door enclosed within a vestibule?: No vestibule				
	New, upgraded or unaltered existing?:							

LIGHTING 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 & Applicant Information	Project Title	Todd Road - 2021 WSEC	For Building Department Use:	Date: Jul 01, 2025
	Project Address	320 Todd Road NE Puyallup, WA 98371		
	Applicant Name	Tom Rieger		
	Applicant Phone	360-226-1945		
	Applicant Email	tom@carvearch.com		
For questions about this report, 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		Office, Other	Building Cond. Floor Area	3,060
General Project Types	Change in Occupancy (Group R converted to Commercial)	New Building or Addition Lighting Scope		Alteration Lighting Scope	Interior Lighting Exterior Lighting	Project Cond. Floor Area	3,060
						Floors Above Grade	1
						Compliance Method	General Prescriptive
Lighting Project Description							

Lighting Compliance Scope and Method	Project Type	Interior / Exterior (Interior includes both interior & parking)	Luminaire Replacement Scope	Compliance Method	LPA Calculation Adjustment	Compliance Verification
	Change in Occupancy	Interior Lighting		Building area	No Calculation Adjustments selected	COMPLIES
Additional Energy Efficiency (AEC) Measures Included	No lighting or electrical additional energy efficiency measures included in project		Load Management (LDM) Measures Included		No lighting or electrical load management measures included in project	

Project Title	Todd Road - 2021 WSEC				Date	Jul 01, 2025
Lighting Power Calculation	CHANGE IN OCCUPANCY - INTERIOR LIGHTING				Compliance Verification	COMPLIES
Compliance Method	Building area		LPA Calculation Adjustment			none

Interior Lighting Power Allowance - Building Area					
Building Areas	Gross Interior Area (SF)	LPA (Watts/SF)	Total Watts Allowed (SF x LPA x 1)	Total Proposed Watts By Building Area	Compliance Status by Building Area
Office	3,060	0.64	1,958	1,790	COMPLIES

Proposed Lighting Power Density								
Fixture Type/Application	Fixture ID	Building Area	New or Existing-to-Remain	Quantity of Fixtures, CLDs or Luminaires (#F)	Watts per Fixture, CLD or Luminaire (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixtures								
Horizontal surface-mount	S1	Office	New	8	32			254
Troffer	T1, SM1	Office	New	23	33			766
Recessed downlight	D1	Office	New	44	18			770

Project Title	Todd Road - 2021 WSEC					Date	Jul 01, 2025
Proposed Fixtures Details		CHANGE IN OCCUPANCY - INTERIOR LIGHTING					
Fixture Type/Application	Fixture ID	Location in Documents		Lamp Type	Building Area	New or Existing-to-Remain	
Individual Fixtures							
Horizontal surface-mount	S1	E2.01		LED	Office	New	
	Fixture Description: 4' Strip Fixture				Are these fixtures located within a daylight zone?: No		

	Do these fixtures require specific application lighting controls?: None required				
Troffer	T1, SM1	E2.01, E2.02	LED	Office	New
	Fixture Description: 2 x 2 troffer			Are these fixtures located within a daylight zone?: Yes, controls provided	
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Do these fixtures require specific application lighting controls?: None required	
Recessed downlight	D1	E2.01, E2.02	LED	Office	New
	Fixture Description: 4" downlight			Are these fixtures located within a daylight zone?: No	
	Do these fixtures require specific application lighting controls?: None required				