



# 2030 COMMITMENT UPDATE

APRIL 6, 2023



mwa architects

Image: Arts Plaza Apartment Housing



INTRODUCTION



COMPANY  
TIMELINE



PROJECTS  
MODELED



UPLOADING  
REPORTING



MOVING  
FORWARD



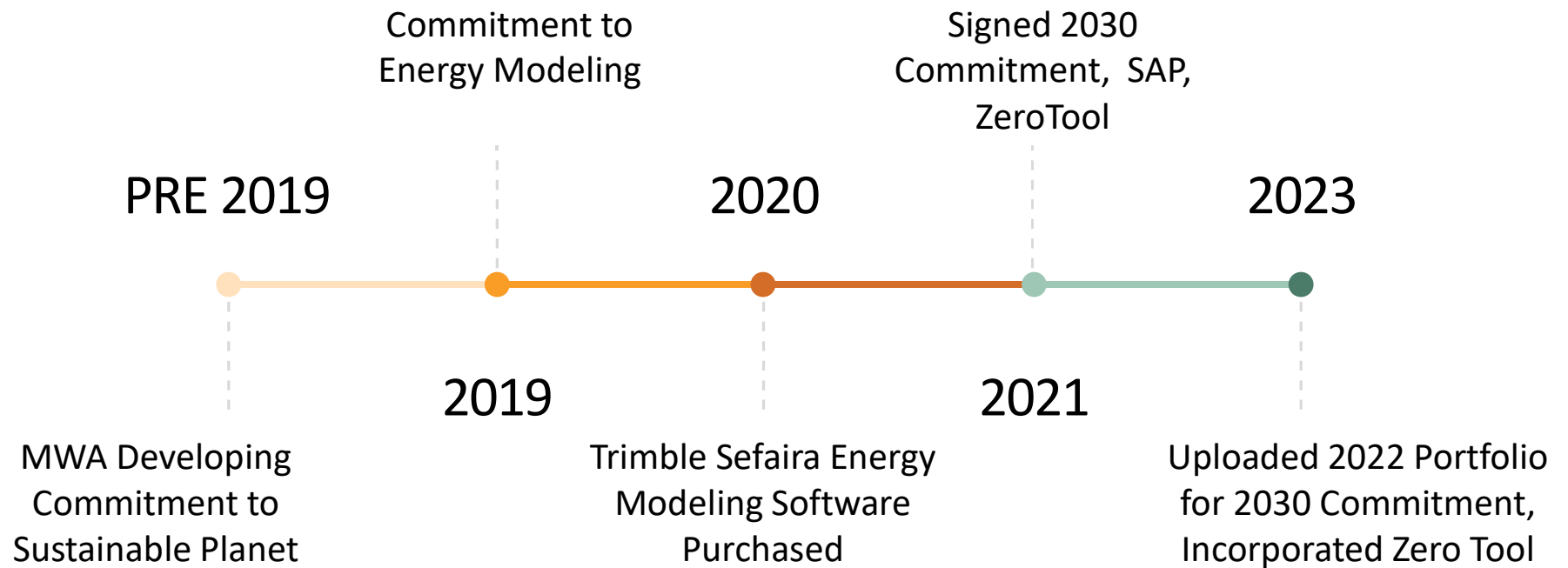
# INTRODUCTION

Oregon State Grad – BS in Interior Design

MWA Sustainability Studio – Interior Designer

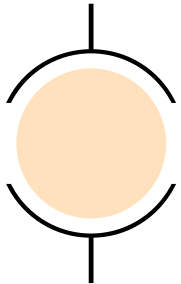
*“A society in which all benefit from beautiful and healthy architecture.”*

# MWA 2030 TIMELINE



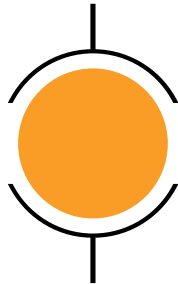
# HIGHLIGHTED PROJECTS

BULL RUN ADMIN  
BUILDING



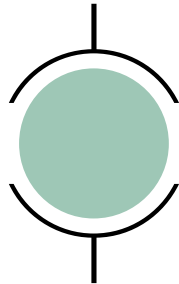
Water Treatment  
Plant  
Portland, OR

ARTS PLAZA  
HOUSING



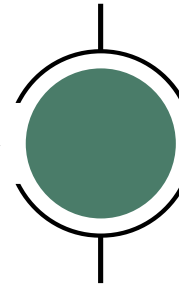
Apartment  
Housing  
Gresham, OR

FIR GROVE  
APARTMENTS



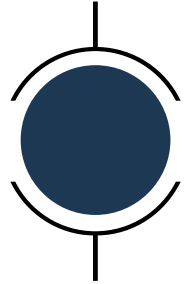
Apartment  
Housing  
Vancouver, WA

HOME FORWARD  
TROUTDALE



Apartment  
Housing  
Troutdale, OR

PENDLETON  
BUS BARN



Public Transit  
Headquarters  
Pendleton, OR



# ENERGY MODELING

1. Tag all elements and simplify models
2. Upload to Sefaira to calculate pEUI



Image: Arts Plaza Apartment Housing

**Walls** ?

Assembly Type Stud

Assembly R-Value 30.00 ft<sup>2</sup>·h·°F/BTU

**Floors** ?

Floor Finish Tiles

Ground Floor R-Value 20.00 ft<sup>2</sup>·h·°F/BTU

**Infiltration** ?

Infiltration Type Crack Infiltration

Design Infiltration Rate 1.29 cfm/ft

**Roof Glazing** ?

Assembly U-Value 0.30 BTU/h·ft<sup>2</sup>·°F

Solar Heat Gain Coefficient (SHGC) 0.25

**Roofs** ?

Roof Type Metal Deck

Roof R-value 49.00 ft<sup>2</sup>·h·°F/BTU

# SEFAIRA WEB APP

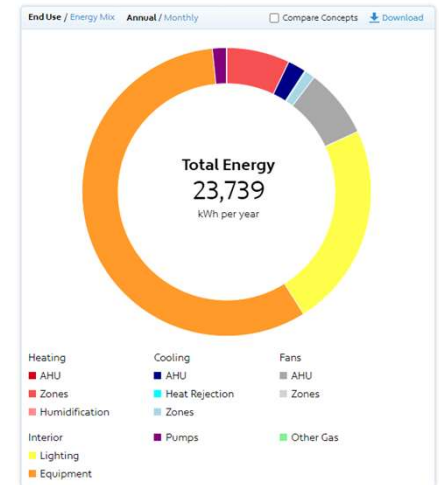
## Pendleton Bus Barn

Pendleton, Oregon, US

Weather location: [Pendleton-Eastern Oregon Rgnl AP, US-OR, US](#) ?

**AIA 2030 COMMITMENT**  
Upload Project

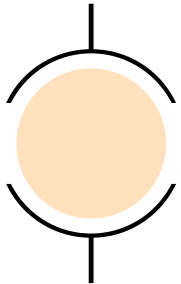
Share Project



		AHU Design Airflow ▾		Cooling Equipment ... ▾		EUI ▾		Annual Energy Cost ▾	
<div>Original Concept</div> <div>2,824 ft<sup>2</sup></div> <div><div>Clone</div><div>Del</div><div>Export Idf</div></div>		<div>HVAC System Type <span>?</span></div> <div>Radiant Floor ▾</div>	417 (cfm)	9.5 ton	29 kBTU/ft <sup>2</sup> /yr	\$2,089			
<div><div></div><div></div></div>	Baseline Concept	Package Terminal AC	754 <span>▲ 80%</span>	4.5 <span>▼ 52%</span>	47 <span>▲ 62%</span>	\$2,644 <span>▲ 26%</span>			
<div><div></div><div></div></div>	Baseline Concept 90	Package Terminal AC	775 <span>▲ 85%</span>	4.7 <span>▼ 50%</span>	48 <span>▲ 65%</span>	\$2,736 <span>▲ 30%</span>			
<div><div></div><div></div></div>	Baseline Concept 180	Package Terminal AC	775 <span>▲ 85%</span>	4.6 <span>▼ 51%</span>	48 <span>▲ 65%</span>	\$2,736 <span>▲ 30%</span>			
<div><div></div><div></div></div>	Baseline Concept 270	Package Terminal AC	775 <span>▲ 85%</span>	4.7 <span>▼ 50%</span>	48 <span>▲ 65%</span>	\$2,740 <span>▲ 31%</span>			
<div><div></div><div></div></div>	Original w/ Solar	Radiant Floor	417 <span>*** 0%</span>	9.5 <span>*** 0%</span>	8 <span>▼ 72%</span>	\$587 <span>▼ 71%</span>			

# RESEARCH FINDINGS

BULL RUN ADMIN  
BUILDING

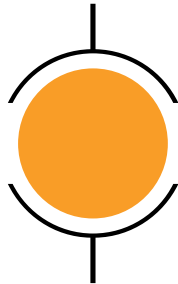


Total SF  
17,797 ft<sup>2</sup>

pEUI: 0.50 kBTU/ft<sup>2</sup>/yr

Total Energy  
2,591 kWh/yr

ARTS PLAZA  
HOUSING

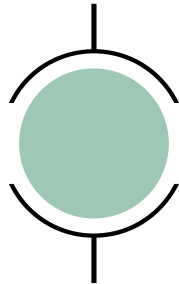


Total SF  
63,753 ft<sup>2</sup>

pEUI: 21 kBTU/ft<sup>2</sup>/yr

Total Energy  
441,262 kWh/yr

FIR GROVE  
APARTMENTS

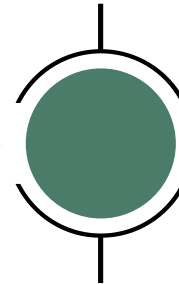


Total SF  
150,229 ft<sup>2</sup>

pEUI: 23 kBTU/ft<sup>2</sup>/yr

Total Energy  
961,841 kWh/yr

HOME FORWARD  
TROUTDALE

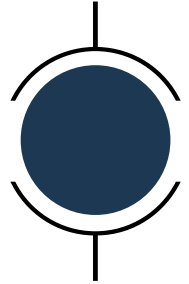


Total SF  
76,094 ft<sup>2</sup>

pEUI: 11 kBTU/ft<sup>2</sup>/yr

Total Energy  
251,927 kWh/yr

PENDLETON  
BUS BARN

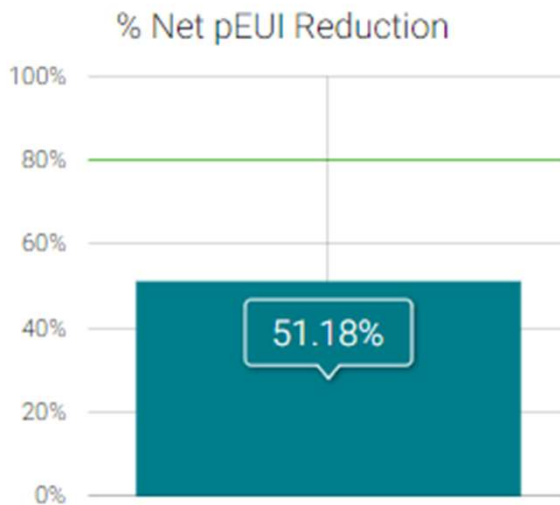


Total SF  
2,636 ft<sup>2</sup>

pEUI: 31 kBTU/ft<sup>2</sup>/yr

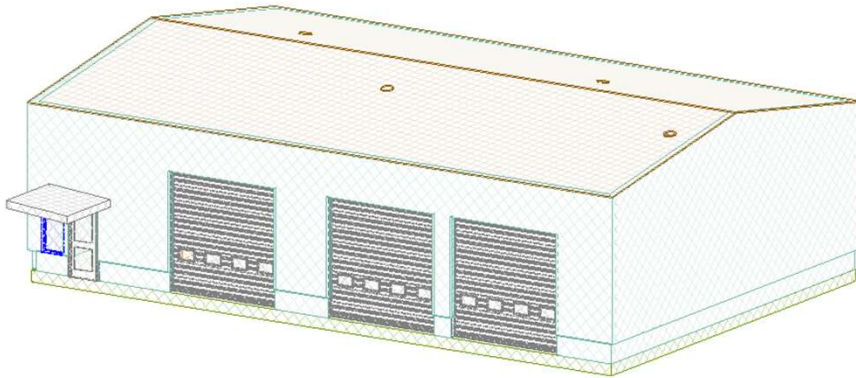
Total Energy  
23,739 kWh/yr

# THEMES



- Average reduction 51%
- Passive energy conservation
  - Insulating materials
  - High performance windows
- Implement renewable energy

# MOVING FORWARD



- Implement models at every stage
  - 30%
  - 60%
  - 90%
  - 100%
- Track project status in Airtable with Marketing team

Image: Pendleton Bus Barn

# MOVING FORWARD

- Building effect on interiors
  - Daylighting
  - Air quality/Ventilation
  - Thermal comfort
- Occupant well-being



Image: Arts Plaza Apartment Housing Render



# THANK YOU



mwa architects

Image: Arts Plaza Apartment Housing