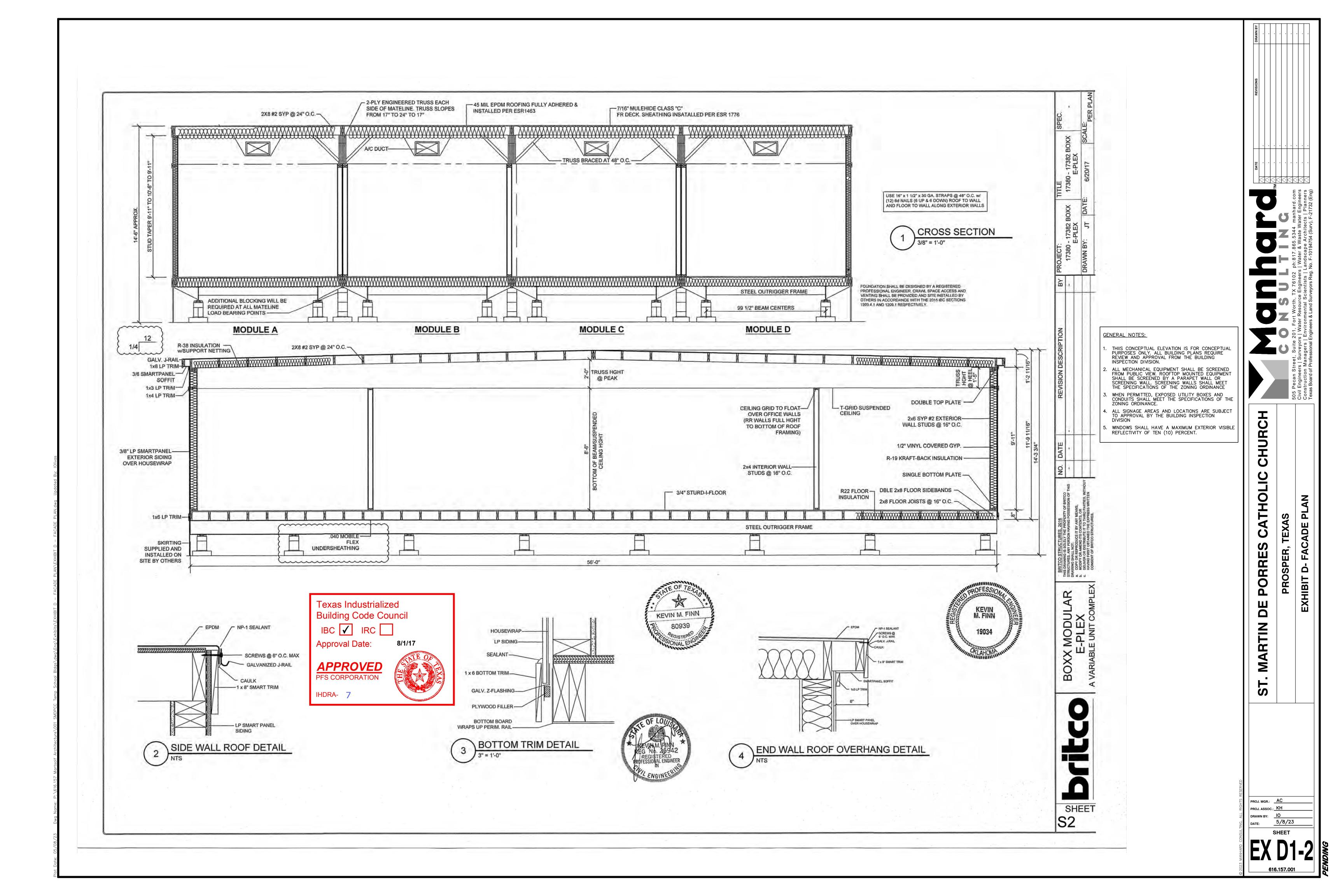


**EXHIBIT D-**



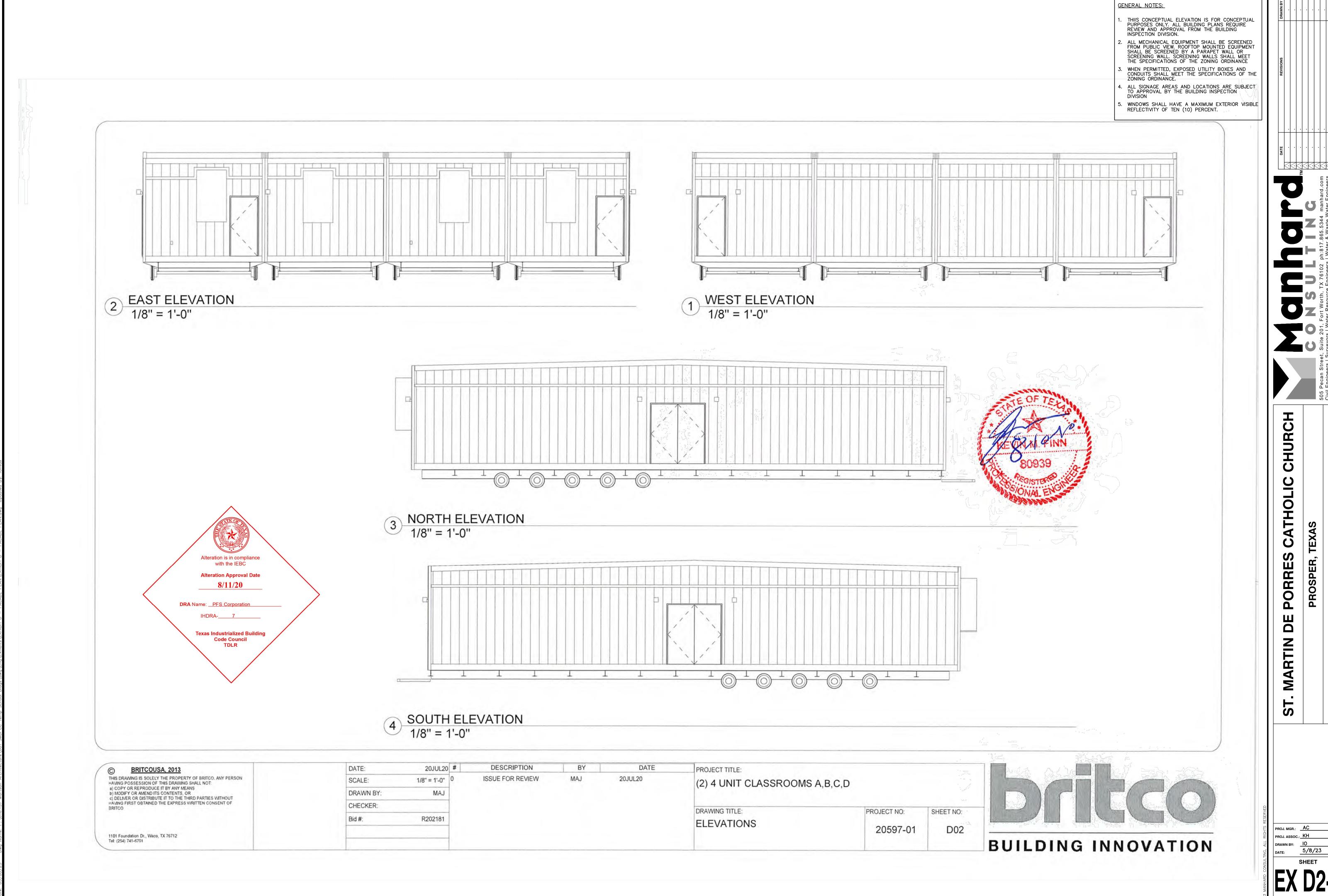


EXHIBIT D- FACADE PI

# PAGE 2 OF 4

UNIT ENVELOPE HEAT LOSS/GAIN CALCULATIONS MODEL: AMTEX NORTEX MODULAR SPACE - N12664-1, HOUSTON, TX. PER ASHRAE 90.1-2004

# COMBINED ROOF/CEILING THERMAL TRANSMITTANCE VALUE CALCULATIONS

ROOF/CLG COMPONENT	AREA	RESIST	A/R
ROOF/CLG CAVITY	6688.125	32.45	206.11
ROOF/CLG FRAMING	691.875	11.83	58.48
TOTALS:	7380		264.5903314
U(ROOF) = (A/R) / A =	0.03585235 BTU/h/DE		* MEETS CODE

# COMBINED GROSS FLOOR THERMAL TRANSMITTANCE VALUE CALCULATIONS

FLOOR COMPONENT	AREA	RESIST	A/R
FLOOR CAVITY	6688.125	25.45	262.79
FLOOR FRAMING	691.875	12.83	53.93
TOTALS:	7380		316.72104
U(FLOOR) = (A/R) / A =	0.04291613 BTU/h/DE		* MEETS CODE

# TOTAL ENVELOPE CONFORMANCE

		GROSS AREA	ACTUAL A/R		Jo IMIT	A X Uo
WALL		3308.5937	3	342.17	0.432	1429.31
ROOF/CEILING	3	738	0	264.59	0.070	516.60
FLOOR		738	0	316.72	0.203	1498.14
	GRAND TOTAL =	18069	)	923.48		3444.052489
			(1)			(2)

0.05110969

IF THE GRAND TOTAL (1) OF THE WALL, ROOF/CEILING AND FLOOR A/R VALUES IS EQUAL TO OR LESS THAN, THE TOTAL (2) OF THE A x Uo CODE LIMITS FOR THE WALL, ROOF/CEILING AND FLOOR, THE TOTAL ENVELOPE MEETS THE CODE, EVEN THOUGH INDIVIDUALLY THE WALL, ROOF/CEILING OR FLOOR MAY NOT.

OVERALL ENVELOPE Uo

IF THE TOTAL ENVELOPE CALCULATION INDICATES THAT THE DESIRED CONSTRUCTION DOES NOT MEET CODE REQUIREMENTS, MAKE CHANGES IN THE STRUCTURE TO ADD INSULATION, REDUCE GLASS AREAS OR USE INSULATING GLASS AS REQUIRED TO MEET THE CODE REQUIREMENTS.



\*\* MEETS CODE \*\*

## UNIT ENVELOPE HEAT LOSS/GAIN CALCULATIONS

MODEL: AMTEX NORTEX MODULAR SPACE - N12664-1, HOUSTON, TX.

OSB	R @ CAV 0.1' 0.00 0.6' 13.00  0.5( 0.6'	7 0 7 0  6 8	R @ STUD 0.17 0.00 0.67  4.38 0.56 0.68
OSB	0.00 0.6i 13.00  0.5i	0 7 0  6 8	0.00 0.67  4.38 0.56
OSB	0.6° 13.0°  0.5° 0.6°	7 0  6 8	0.67  4.38 0.56
OSB	13.00  0.56 0.66	0  6 8	4.38 0.56
	0.50 0.66	6 8	4.38 0.56
	0.56	6 8	0.56
	0.68	8	
			0.68
	15.0	18	
			6.46
		14.27	
		0.0701	
	R @ CAV	/ITY	R @ JOIST
	0.68	3	0.68
	1.5	5	1.55
	0.93	3	0.93
	22.00	0	
		. <u></u>	9.38
	0.12	2	0.12
	0.1	7	0.17
	25.4	<b>1</b> 5	12.83
		24.27	
		0.0412	
SUMMARY			
Tayon Industrialia	o d		
			314.53
			0.00
IBC ✓ IRC L			60.00
Approval Date:			
5/17/10	THE OF		
<u>APPROVED</u>			
PFS CORPORATION			
IHDRA- 7			
	Texas Industrializ Building Code Co IBC  IRC  IRC  Approval Date: 5/17/10 APPROVED PES CORPORATION IHDRA- 7	1.55 0.93 22.00 0.12 0.17 25.4  SUMMARY  Texas Industrialized Building Code Council IBC  IRC  Approval Date: 5/17/10 APPROVED PFS CORPORATION IHDRA- 7  TANCE VALUE CALCULATIONS	SUMMARY  Texas Industrialized  Building Code Council  IBC IRC  Approval Date:  5/17/10  APPROVED PFS CORPORATION  IHDRA- 7  TANCE VALUE CALCULATIONS

### **GENERAL NOTES:**

- THIIS CONCEPTUAL ELEVATION IS FOR CONCEPTUAL PURPOSES ONLY. ALL BUILDING PLANS REQUIRE REVIEW AND APPROVAL FROM THE BUILDING INSPECTION DIVISION.
- ALL MECHANICAL EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW. ROOFTOP MOUNTED EQUIPMENT SHALL BE SCREENED BY A PARAPET WALL OR SCREENING WALL. SCREENING WALLS SHALL MEET THE SPECIFICATIONS OF THE ZONING ORDINANCE
- WINDOWS SHALL HAVE A MAXIMUM EXTERIOR VISIBLE REFLECTIVITY OF TEN (10) PERCENT.

# PAGE 3 OF 4

TOTALS:

U(WALL) = (A/R) / A =

UNIT ENVELOPE HEAT LOSS/GAIN CALCULATIONS MODEL: AMTEX NORTEX MODULAR SPACE - N12664-1, HOUSTON, TX. PER ASHRAE 90.1-2004

TOTAL HEAT LOSS

342.169

124.36 MBTU

150.38 MBTU

\* MEETS CODE

# TOTAL ENVELOPE HEAT LOSS CALCULATIONS

3308.594

0.10341822 BTU/h/DE

			DESIGN	HEAT LOSS
ITEM	AREA	U-VALUE	TEMP	MBTU/H
FLOOR	7380	0.0412	45	13.69
WALLS	3308.59373	0.0701	45	10.43
ROOF	7380	0.0321	45	10.66
WINDOWS	0	0.5400	45	0.00
METAL DOORS	60	0.5000	45	1.35
GLASS DOORS	42	1.0989	45	2.08
VENTILATION (CFM)	1480	0.0180	45	71.93
INFILTRATION	366	0.4320	45	14.23

THIS IS EQUIVALENT TO 36.1 KW OF ELECTRIC HEAT REQUIRED IF RESISTANCE HEAT ALONE IS PROVIDED. IF A HEAT PUMP UNIT IS USED, THE TOTAL HEATING CAPACITY OF THE UNIT MUST BE CONSIDERED.

# TOTAL ENVELOPE HEAT GAIN CALCULATIONS

ITEM	AREA	U-VALUE		DESIGN TEMP	HEAT GAIN MBTU/H
FLOOR	7380	0	.0412	19	5.78
WALLS	3308.59373	0	.0701	19	4.40
ROOF	7380	0	.0321	19	4.50
WINDOWS	0		0.54	19	0.00
METAL DOORS	60	0	.5000	19	0.57
GLASS DOORS	42	1	.0989	19	0.88
SUNLIGHT THRU GLASS	42	2.	.02702	19	1.62
LIGHTING	7380		1	W/SF	25.18
OCCUPANCY 100sf/OCU	74			PEOPLE	33.30
MISC OFFICE OR CLSRM EQUIP	7380		1.5	W/SF	37.77
DUCT LOSS				19	
VENTILATION (CFM)	1480	0	.0180	19	30.37
INFILTRATION	366	0	.4320	19	6.01

Texas Industrialized TOTAL TONS OF COOLING REQUIRED = 12.53 **Building Code Council** SQ. FEET OF FLOOR AREA PER TON = IBC ✓ IRC 🗌 Approval Date:

TOTAL HEAT GAIN

WHEN PERMITTED, EXPOSED UTILITY BOXES AND CONDUITS SHALL MEET THE SPECIFICATIONS OF THE ZONING ORDINANCE.

ALL SIGNAGE AREAS AND LOCATIONS ARE SUBJECT TO APPROVAL BY THE BUILDING INSPECTION

ORRES PROSPER,

DRAWN BY: 10 DATE: 5/8/23