Electric Service Planning Application (ESPA)

Refer to the Austin Energy Design Criteria Manual

Clear Form

Fill out one ESPA per main disconnect or distribution enclosure. Review of this application may result in a request for additional information.

The form must be filled out completely. See instructions online at Electric Service Design & Planning.

I. Service Area

A map of the service areas and contacts can be found online at Electric Distribution Contacts Map.

a) All services equal to or **under** 350A single-phase or 225A three-phase.	b) All service **over** 350A single-phase or 225A three-phase	c) All services in **downtown Network area**

Complete ESPA and submit to DAC.	**For these sections (I.b & I.c) complete ESPA and submit online at Distribution Design Intake Form.**		
☐ Development Assistance Center 6310 Wilhelmina Delco Drive Ph: 512-978-4000 aebspaespa@austinenergy.com	☐ North: Kramer Service Center Ph: 512-505-7181	■ South: St. Elmo Service Center Ph: 512-505-7682	☐ Downtown Network Ph: 512-505-7682

Small Cell: Submit ESPA online at Small Cell Web Form Distributed Generation (solar, etc.): Use Distributed Generation Planning Application (DGPA)

II. Customer & Project Information

(a) Customer Information

Property Owner Name: Rahul Singh Phone: 512-438-9389 Email: rahul_singh_tomar@yahoo.com

(Austin Energy may request the property owner contact information of adjacent properties where AE work is required.)

Prop Owner Representative Name (if different): David Mitchell Title: ■ Elect Engineer ☐ Elect Contractor ☐ Other_____

Rep Phone: 512-328-6995 Rep Fax: _____ Rep Email: david_mitchell@ats-engineers.com

Property Owner or Rep Signature: David Mitchell Digitally signed by David Mitchell Date: 2022.01.19 08:49:10 -06'00' Date: 1/19/2022

(b) Project Information:

Project Name: Sun, Moon Stars Day Care

911 Service Address: 3808 S 1st Street

Nearest Intersection: 1st and Krebs

Service Provider: ■ Austin Energy ☐ Other_____

(c) Project Type:

■ New Construction ☐ Remodel/Rebuild ☐ Traffic Signal
☐ Dual Feed ☐ Small Cell

Estimated Service Need Date: 2/1/2022

(d) Service Duration:

■ Permanent Service ☐ Construction Power/Temporary Service (less than 24 months)

(e) Site Plan Case Number: _____

III. Electrical Information

Refer to the appropriate table in the Austin Energy Criteria Manual for available electric services.

(a) Type of Service Requested:

__ Overhead Service
☑ Secondary Riser
☐ Underground Service

Downtown Network Options:

☐ Network Transformer Vault
☐ Network Underground Secondary

(b) Service Voltage Requested:

■ 120/240 V, 1ϕ, 3-Wire
☐ 120/240 V, 3ϕ, 4-Wire (Overhead or secondary riser only)
☐ 120/208V, 3ϕ, 4-Wire
☐ 120/208V, 1ϕ, 3-Wire (Network Only)
☐ 277/480 V, 3ϕ, 4-Wire
☐ 7200/12470 V (Primary Meter)

(c) Additional Service & Electrical Load Information:

Building Use (Residential, Warehouse, Restaurant, Retail, Office, Mixed Use, etc.): Day Care

FT²/Average Unit: 4416 # Units: 1

Total Building FT²: 4416

Fuel Type: ■ All Electric ☐ Gas & Electric

Total NEC-Calculated Load: 364A (amps)

Service Wire Type, Size, & Quantity: 2 sets of (3) 3/0 AWG (CU) , 2-3"C

Service Length: _____

(d) Main Disconnect (1st interrupting device) or Distribution Enclosure size (total of all meters):

☐ 200 Amps ☐ 600 Amps ☐ 1600 Amps
☐ 350 Amps ☐ 800 Amps ☐ 2000 Amps
■ 400 Amps ☐ 1200 Amps ☐ Other_____

Note: Austin Energy may size equipment based on empirical data and not necessarily per the main disconnect size.

(e) New Meter Size(s):

List revenue meters only. For DG meters (solar, etc.) use DGPA.

1. Meter Can Size 400A (amps) x # Meters ____
2. Meter Can Size_____ (amps) x # Meters ____
3. Meter Can Size_____ (amps) x # Meters ____
4. Meter Can Size_____ (amps) x # Meters ____

(For multiple meters attach a list of unit #'s.)

Number of existing meters: 0

Total number of meters after job is complete: 1

(f) Meter Enclosure(s):

Click here for list of approved mfg #'s.

Click here for modular metering specifications.

AE Metering Questions;
AEDMODispatch@austinenergy.com

For internal use only

☒ Design Required AE Work Request Number (WR#) 204187

☐ Service Only

AE Rep: _____ Phone: _____ Date: _____

Comments: designer robert reyes 512-505-7116, 400a trans socket contact metering for inspection

APPROVED
Approval Stamp Verification
By Joseph Chmiel at 12:40 pm, Feb 24, 2022

Permitting Department; 6310 Wilhelmina Delco Dr; https://abc.austintexas.gov/web/permit

Electric Permit #: _____

Sun Moon Stars Day Care
HVAC Load Analysis

for

Nvizion

Prepared By:

Ats Engineers

4910 W Hwy 290

Thursday, December 23, 2021

Building Summary Loads

Building peaks in July at 4pm.

Bldg Load Descriptions	Area Quan	Sen Loss	%Tot Loss	Lat Gain	Sen Gain	Net Gain	%Net Gain
Roof	2,662	3,882	4.14	0	3,198	3,198	2.02
Wall	3,554	10,367	11.06	0	6,053	6,053	3.82
Glass	475	8,002	8.54	0	14,962	14,962	9.45
Floor Slab	0	0	0.00	0	0	0	0.00
Skin Loads		22,251	23.74	0	24,213	24,213	15.29
Lighting	6,183	0	0.00	0	23,207	23,207	14.65
Equipment	3,957	0	0.00	0	14,851	14,851	9.38
Pool Latent	0	0	0.00	0	0	0	0.00
People	75	0	0.00	16,500	18,975	35,475	22.40
Partition	0	0	0.00	0	0	0	0.00
Cool. Pret.	0	0	0.00	0	0	0	0.00
Heat. Pret.	0	0	0.00	0	0	0	0.00
Cool. Vent.	1,326	0	0.00	26,940	32,837	59,777	37.75
Heat. Vent.	1,326	71,489	76.26	0	0	0	0.00
Cool. Infil.	0	0	0.00	0	0	0	0.00
Heat. Infil.	0	0	0.00	0	0	0	0.00
Draw-Thru Fan	0	0	0.00	0	846	846	0.53
Blow-Thru Fan	0	0	0.00	0	0	0	0.00
Reserve Cap.	0	0	0.00	0	0	0	0.00
Reheat Cap.	0	0	0.00	0	0	0	0.00
Supply Duct	0	0	0.00	0	0	0	0.00
Return Duct	0	0	0.00	0	0	0	0.00
Misc. Supply	0	0	0.00	0	0	0	0.00
Misc. Return	0	0	0.00	0	0	0	0.00
Building Totals		93,740	100.00	43,440	114,930	158,370	100.00

Building Summary	Sen Loss	%Tot Loss	Lat Gain	Sen Gain	Net Gain	%Net Gain
Ventilation	71,489	76.26	26,940	32,837	59,777	37.75
Infiltration	0	0.00	0	0	0	0.00
Pretreated Air	0	0.00	0	0	0	0.00
Room Loads	22,251	23.74	16,500	81,246	97,746	61.72
Plenum Loads	0	0.00	0	0	0	0.00
Fan/Duct/Misc Loads	0	0.00	0	846	846	0.53
Building Totals	93,740	100.00	43,440	114,930	158,370	100.00

Check Figures

Total Building Supply Air (based on a 22° TD):	3,610	CFM
Total Building Vent. Air (36.73% of Supply):	1,326	CFM
Total Conditioned Air Space:	4,416	Sq.ft
Supply Air Per Unit Area:	0.8175	CFM/Sq.ft
Area Per Cooling Capacity:	334.6	Sq.ft/Ton
Cooling Capacity Per Area:	0.0030	Tons/Sq.ft
Heating Capacity Per Area:	21.23	Btuh/Sq.ft
Total Heating Required With Outside Air:	93,740	Btuh
Total Cooling Required With Outside Air:	13.20	Tons

Air Handler #1 - Ahu-1 - Summary Loads

Rm No	Description Room Peak Time	Area People Volume	Htg.Loss Htg.CFM CFM/Sqft	Sen.Gain Clg.CFM CFM/Sqft	Lat.Gain S.Exh W.Exh	Htg.O.A. Req.CFM Act.CFM	Clg.O.A. Req.CFM Act.CFM
12	Storage/Laundry	1,060	7,035	15,256	0	None	None
	4pm August	0	131	740	0	127	127
		10,597	0.12	0.70	0	131	131
13	Janitor	24	137	315	0	None	None
	3pm August	0	3	15	0	1	1
		240	0.11	0.64	0	3	3
14	Restroom 4	55	716	1,449	0	5/P, 0.06/ft²	5/P, 0.06/ft²
	9am August	0	13	70	0	3	3
		547	0.24	1.29	0	13	12
15	Mecahnical Room	250	1,607	3,516	0	10/P, 0.18/ft²	10/P, 0.18/ft²
	5pm August	0	30	171	0	45	45
		3,250	0.12	0.68	0	30	30
	Room Peak Totals:	1,388	9,496	20,535	0		
	Total Rooms: 4	0	177	996	0	177	177
	Unique Rooms: 4	14,634	0.13	0.72	0	177	177

Air Handler #1 - Ahu-1 - Total Load Summary

Air Handler Description:	Ahu-1 Constant Volume - Proportion
Supply Air Fan:	Draw-Thru with program estimated horsepower of 0.09 HP
Fan Input:	0% motor and fan efficiency with 0 in. water across the fan
Sensible Heat Ratio:	1.00 --- This system occurs 1 time(s) in the building. ---

Air System Peak Time:	4pm in July.
Outdoor Conditions:	Clg: 98° DB, 75° WB, 96.10 grains, Htg: 24° DB
Indoor Conditions:	Clg: 75° DB, 50% RH, Htg: 75° DB

Because of the diversity in room, plenum and ventilation loads, the room sensible peak time in August at 4pm is different from the total system peak time, hence the air system CFM was computed using a room sensible load of 20,148.

Summer: Ventilation controls outside air, ----- Winter: Ventilation controls outside air.

Room Space sensible loss:	9,496	Btuh			
Infiltration sensible loss:	0	Btuh	0	CFM	
Outside Air sensible loss:	9,534	Btuh	177	CFM	
Supply Duct sensible loss:	0	Btuh			
Return Duct sensible loss:	0	Btuh			
Return Plenum sensible loss:	0	Btuh			
Total System sensible loss:					19,030 Btuh
Heating Supply Air: 9,496 / (.979 X 1.08 X 51) =			177	CFM	
Winter Vent Outside Air (100.0% of supply) =			177	CFM	
Room space sensible gain:	19,630	Btuh			
Infiltration sensible gain:	0	Btuh			
Draw-thru fan sensible gain:	234	Btuh			
Supply duct sensible gain:	0	Btuh			
Reserve sensible gain:	0	Btuh			
Total sensible gain on supply side of coil:					19,863 Btuh
Cooling Supply Air: 20,381 / (.979 X 1.1 X 19) =			996	CFM	
Summer Vent Outside Air (17.8% of supply) =			177	CFM	
Return duct sensible gain:	0	Btuh			
Return plenum sensible gain:	0	Btuh			
Outside air sensible gain:	4,379	Btuh	177	CFM	
Blow-thru fan sensible gain:	0	Btuh			
Total sensible gain on return side of coil:					4,379 Btuh
Total sensible gain on air handling system:					24,243 Btuh
Room space latent gain:	0	Btuh			
Infiltration latent gain:	0	Btuh			
Outside air latent gain:	3,593	Btuh			
Total latent gain on air handling system:					3,593 Btuh
Total system sensible and latent gain:					27,836 Btuh

Check Figures

Total Air Handler Supply Air (based on a 19° TD):	996	CFM
Total Air Handler Vent. Air (17.75% of Supply):	177	CFM
Total Conditioned Air Space:	1,388	Sq.ft
Supply Air Per Unit Area:	0.7177	CFM/Sq.ft
Area Per Cooling Capacity:	598.5	Sq.ft/Ton
Cooling Capacity Per Area:	0.0017	Tons/Sq.ft
Heating Capacity Per Area:	13.71	Btuh/Sq.ft
Total Heating Required With Outside Air:	19,030	Btuh
Total Cooling Required With Outside Air:	2.32	Tons

Air Handler #2 - Ahu-2 - Summary Loads

Rm No	Description Room Peak Time	Area People Volume	Htg.Loss Htg.CFM CFM/Sqft	Sen.Gain Clg.CFM CFM/Sqft	Lat.Gain S.Exh W.Exh	Htg.O.A. Req.CFM Act.CFM	Clg.O.A. Req.CFM Act.CFM
1	Toddlers 1	441	1,990	11,605	3,520	10/P, 0.18/ft²	10/P, 0.18/ft²
	8am August	16	139	485	0	239	239
		4,410	0.32	1.10	0	139	149
2	Restroom 2	329	197	3,098	0	5/P, 0.06/ft²	5/P, 0.06/ft²
	3pm September	0	14	130	0	20	20
		3,290	0.04	0.39	0	14	40
8	Reception	268	1,427	6,683	880	5/P, 0.06/ft²	5/P, 0.06/ft²
	8am August	4	100	280	0	36	36
		2,682	0.37	1.04	0	100	86
9	Restroom1	50	73	513	0	5/P, 0.06/ft²	5/P, 0.06/ft²
	3pm August	0	5	21	0	3	3
		500	0.10	0.43	0	5	7
10	Corridor 2	200	756	2,291	0	None	None
	4pm August	0	53	96	0	12	12
		2,000	0.26	0.48	0	53	29
	Room Peak Totals:	1,288	4,443	24,189	4,400		
	Total Rooms: 5	20	310	1,012	0	310	310
	Unique Rooms: 5	12,882	0.24	0.79	0	310	310

Air Handler #2 - Ahu-2 - Total Load Summary

Air Handler Description:	Ahu-2 Constant Volume - Proportion
Supply Air Fan:	Draw-Thru with program estimated horsepower of 0.10 HP
Fan Input:	0% motor and fan efficiency with 0 in. water across the fan
Sensible Heat Ratio:	0.84 --- This system occurs 1 time(s) in the building. ---

Air System Peak Time:	1pm in July.
Outdoor Conditions:	Clg: 96° DB, 75° WB, 99.08 grains, Htg: 24° DB
Indoor Conditions:	Clg: 75° DB, 50% RH, Htg: 75° DB

Because of the diversity in room, plenum and ventilation loads, the room sensible peak time in August at 9am is different from the total system peak time, hence the air system CFM was computed using a room sensible load of 23,724.

Summer: Ventilation controls outside air, ----- Winter: Ventilation controls outside air.

Room Space sensible loss:	4,443	Btuh			
Infiltration sensible loss:	0	Btuh	0	CFM	
Outside Air sensible loss:	16,721	Btuh	310	CFM	
Supply Duct sensible loss:	0	Btuh			
Return Duct sensible loss:	0	Btuh			
Return Plenum sensible loss:	0	Btuh			
Total System sensible loss:					21,164 Btuh
Heating Supply Air: 4,443 / (.979 X 1.08 X 14) =			310	CFM	
Winter Vent Outside Air (100.0% of supply) =			310	CFM	
Room space sensible gain:	20,602	Btuh			
Infiltration sensible gain:	0	Btuh			
Draw-thru fan sensible gain:	237	Btuh			
Supply duct sensible gain:	0	Btuh			
Reserve sensible gain:	0	Btuh			
Total sensible gain on supply side of coil:					20,840 Btuh
Cooling Supply Air: 23,962 / (.979 X 1.1 X 22) =			1,012	CFM	
Summer Vent Outside Air (30.7% of supply) =			310	CFM	
Return duct sensible gain:	0	Btuh			
Return plenum sensible gain:	0	Btuh			
Outside air sensible gain:	7,013	Btuh	310	CFM	
Blow-thru fan sensible gain:	0	Btuh			
Total sensible gain on return side of coil:					7,013 Btuh
Total sensible gain on air handling system:					27,852 Btuh
Room space latent gain:	4,400	Btuh			
Infiltration latent gain:	0	Btuh			
Outside air latent gain:	6,971	Btuh			
Total latent gain on air handling system:					11,371 Btuh
Total system sensible and latent gain:					39,223 Btuh

Check Figures

Total Air Handler Supply Air (based on a 22° TD):	1,012	CFM
Total Air Handler Vent. Air (30.66% of Supply):	310	CFM
Total Conditioned Air Space:	1,288	Sq.ft
Supply Air Per Unit Area:	0.7854	CFM/Sq.ft
Area Per Cooling Capacity:	394.1	Sq.ft/Ton
Cooling Capacity Per Area:	0.0025	Tons/Sq.ft
Heating Capacity Per Area:	16.43	Btuh/Sq.ft
Total Heating Required With Outside Air:	21,164	Btuh
Total Cooling Required With Outside Air:	3.27	Tons

Air Handler #3 - Ahu-3 - Summary Loads

Rm No	Description Room Peak Time	Area People Volume	Htg.Loss Htg.CFM CFM/Sqft	Sen.Gain Clg.CFM CFM/Sqft	Lat.Gain S.Exh W.Exh	Htg.O.A. Req.CFM Act.CFM	Clg.O.A. Req.CFM Act.CFM
3	Infants 2	377	1,736	8,278	2,860	10/P, 0.18/ft²	10/P, 0.18/ft²
	5pm June	13	257	284	0	198	198
		3,767	0.68	0.75	0	257	182
7	Infants 1	366	984	8,698	2,860	10/P, 0.18/ft²	10/P, 0.18/ft²
	1pm December	13	146	299	0	196	196
		3,660	0.40	0.82	0	146	191
11	Corridor 1	150	0	1,351	0	None	None
	12am December	0	0	46	0	9	9
		1,500	0.00	0.31	0	0	30
	Room Peak Totals:	893	2,720	18,327	5,720		
	Total Rooms: 3	26	403	630	0	403	403
	Unique Rooms: 3	8,927	0.45	0.71	0	403	403

Air Handler #3 - Ahu-3 - Total Load Summary

Air Handler Description:	Ahu-3 Constant Volume - Proportion
Supply Air Fan:	Draw-Thru with program estimated horsepower of 0.06 HP
Fan Input:	0% motor and fan efficiency with 0 in. water across the fan
Sensible Heat Ratio:	0.75 --- This system occurs 1 time(s) in the building. ---
Air System Peak Time:	2pm in July.
Outdoor Conditions:	Clg: 98° DB, 75° WB, 96.10 grains, Htg: 24° DB
Indoor Conditions:	Clg: 75° DB, 50% RH, Htg: 75° DB

Because of the diversity in room, plenum and ventilation loads, the room sensible peak time in September at 1pm is different from the total system peak time, hence the air system CFM was computed using a room sensible load of 17,475.

Summer: Ventilation controls outside air, ----- Winter: Ventilation controls outside air.

Room Space sensible loss:	2,720 Btuh			
Infiltration sensible loss:	0 Btuh	0 CFM		
Outside Air sensible loss:	21,706 Btuh	403 CFM		
Supply Duct sensible loss:	0 Btuh			
Return Duct sensible loss:	0 Btuh			
Return Plenum sensible loss:	0 Btuh			
Total System sensible loss:			24,425	Btuh
Heating Supply Air: 2,720 / (.979 X 1.08 X 6) =		403 CFM		
Winter Vent Outside Air (100.0% of supply) =		403 CFM		
Room space sensible gain:	17,015 Btuh			
Infiltration sensible gain:	0 Btuh			
Draw-thru fan sensible gain:	148 Btuh			
Supply duct sensible gain:	0 Btuh			
Reserve sensible gain:	0 Btuh			
Total sensible gain on supply side of coil:			17,163	Btuh
Cooling Supply Air: 17,623 / (.979 X 1.1 X 26) =		630 CFM		
Summer Vent Outside Air (64.0% of supply) =		403 CFM		
Return duct sensible gain:	0 Btuh			
Return plenum sensible gain:	0 Btuh			
Outside air sensible gain:	9,970 Btuh	403 CFM		
Blow-thru fan sensible gain:	0 Btuh			
Total sensible gain on return side of coil:			9,970	Btuh
Total sensible gain on air handling system:			27,133	Btuh
Room space latent gain:	5,720 Btuh			
Infiltration latent gain:	0 Btuh			
Outside air latent gain:	8,180 Btuh			
Total latent gain on air handling system:			13,900	Btuh
Total system sensible and latent gain:			41,033	Btuh

Check Figures

Total Air Handler Supply Air (based on a 26° TD):	630	CFM
Total Air Handler Vent. Air (63.96% of Supply):	403	CFM
Total Conditioned Air Space:	893	Sq.ft
Supply Air Per Unit Area:	0.7053	CFM/Sq.ft
Area Per Cooling Capacity:	261.1	Sq.ft/Ton
Cooling Capacity Per Area:	0.0038	Tons/Sq.ft
Heating Capacity Per Area:	27.36	Btuh/Sq.ft
Total Heating Required With Outside Air:	24,425	Btuh
Total Cooling Required With Outside Air:	3.42	Tons

Air Handler #4 - Ahu-4 - Summary Loads

Rm No	Description Room Peak Time	Area People Volume	Htg.Loss Htg.CFM CFM/Sqft	Sen.Gain Clg.CFM CFM/Sqft	Lat.Gain S.Exh W.Exh	Htg.O.A. Req.CFM Act.CFM	Clg.O.A. Req.CFM Act.CFM
4	Toddlers 2	430	2,554	12,871	3,520	10/P, 0.18/ft²	10/P, 0.18/ft²
	4pm August	16	199	503	0	237	237
		4,302	0.46	1.17	0	199	226
5	Restroom 3	50	292	631	0	5/P, 0.06/ft²	5/P, 0.06/ft²
	4pm August	0	23	25	0	3	3
		500	0.46	0.49	0	23	11
6	Infants 3	367	2,748	11,399	2,860	10/P, 0.18/ft²	10/P, 0.18/ft²
	3pm September	13	214	445	0	196	196
		3,670	0.58	1.21	0	214	200
	Room Peak Totals:	847	5,594	24,902	6,380		
	Total Rooms: 3	29	436	973	0	436	436
	Unique Rooms: 3	8,472	0.52	1.15	0	436	436

Air Handler #4 - Ahu-4 - Total Load Summary

Air Handler Description:	Ahu-4 Constant Volume - Proportion
Supply Air Fan:	Draw-Thru with program estimated horsepower of 0.09 HP
Fan Input:	0% motor and fan efficiency with 0 in. water across the fan
Sensible Heat Ratio:	0.80 --- This system occurs 1 time(s) in the building. ---

Air System Peak Time:	4pm in July.
Outdoor Conditions:	Clg: 98° DB, 75° WB, 96.10 grains, Htg: 24° DB
Indoor Conditions:	Clg: 75° DB, 50% RH, Htg: 75° DB

Because of the diversity in room, plenum and ventilation loads, the room sensible peak time in August at 4pm is different from the total system peak time, hence the air system CFM was computed using a room sensible load of 24,900.

Summer: Ventilation controls outside air, ----- Winter: Ventilation controls outside air.

Room Space sensible loss:	5,594	Btuh			
Infiltration sensible loss:	0	Btuh	0	CFM	
Outside Air sensible loss:	23,528	Btuh	436	CFM	
Supply Duct sensible loss:	0	Btuh			
Return Duct sensible loss:	0	Btuh			
Return Plenum sensible loss:	0	Btuh			
Total System sensible loss:					29,121 Btuh
Heating Supply Air: 5,594 / (.979 X 1.08 X 12) =			436	CFM	
Winter Vent Outside Air (100.0% of supply) =			436	CFM	
Room space sensible gain:	24,434	Btuh			
Infiltration sensible gain:	0	Btuh			
Draw-thru fan sensible gain:	228	Btuh			
Supply duct sensible gain:	0	Btuh			
Reserve sensible gain:	0	Btuh			
Total sensible gain on supply side of coil:					24,662 Btuh
Cooling Supply Air: 25,128 / (.979 X 1.1 X 24) =			973	CFM	
Summer Vent Outside Air (44.9% of supply) =			436	CFM	
Return duct sensible gain:	0	Btuh			
Return plenum sensible gain:	0	Btuh			
Outside air sensible gain:	10,807	Btuh	436	CFM	
Blow-thru fan sensible gain:	0	Btuh			
Total sensible gain on return side of coil:					10,807 Btuh
Total sensible gain on air handling system:					35,469 Btuh
Room space latent gain:	6,380	Btuh			
Infiltration latent gain:	0	Btuh			
Outside air latent gain:	8,866	Btuh			
Total latent gain on air handling system:					15,246 Btuh
Total system sensible and latent gain:					50,715 Btuh

Check Figures

Total Air Handler Supply Air (based on a 24° TD):	973	CFM
Total Air Handler Vent. Air (44.88% of Supply):	436	CFM
Total Conditioned Air Space:	847	Sq.ft
Supply Air Per Unit Area:	1.1480	CFM/Sq.ft
Area Per Cooling Capacity:	200.5	Sq.ft/Ton
Cooling Capacity Per Area:	0.0050	Tons/Sq.ft
Heating Capacity Per Area:	34.38	Btuh/Sq.ft
Total Heating Required With Outside Air:	29,121	Btuh
Total Cooling Required With Outside Air:	4.23	Tons

Room Detailed Loads (At Room Peak Times)

Load Description	Unit Quan	U.Fac/ Usage	Conv. S.Gain	Radiant S.Gain	Total S.Gain	Lat. Gain	Htg. Mult.	Htg. Loss
Room 1-Toddlers 1 peaks (sensible) in August at 8am, Air Handler 2 (Ahu-2), Zone 0, 441.0 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Wall-1-N-Type:7	175	0.052	26	42	68		2.652	464
Wall-2-E-Type:7	157	0.052	72	84	156		2.652	416
Gls-E-1-0%S	60.7	0.360	332	408	740		15.300	929
Unshaded Beam	60.7		0	2,294	2,294			
Lights-Prof=0	617	1.000	695	1,411	2,107			
Equipment-Prof=0	441	1.000	1,204	301	1,505	0		
People-Prof=0	16.0	1.000	1,472	2,208	3,680	3,200		
Sub-total					10,550	3,200		1,809
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					11,605	3,520		1,990
Room 2-Restroom 2 peaks (sensible) in September at 3pm, Air Handler 2 (Ahu-2), Zone 0, 47.0 x 7.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Wall-1-S-Type:7	68	0.052	49	72	122		2.652	179
Lights-Prof=0	461	1.000	519	1,053	1,572			
Equipment-Prof=0	329	1.000	898	225	1,123	0		
Sub-total					2,816	0		179
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					3,098	0		197
Room 3-Infants 2 peaks (sensible) in June at 5pm, Air Handler 3 (Ahu-3), Zone 0, 376.7 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Roof-1-UP-Type:10	377	0.026	61	318	379		1.326	500
Wall-1-N-Type:7	136	0.052	77	113	190		2.652	361
Gls-N-1-0%S	46.9	0.360	225	427	652		15.300	717
Unshaded Beam	46.9		0	230	230			
Lights-Prof=0	527	1.000	594	1,206	1,799			
Equipment-Prof=0	377	1.000	1,028	257	1,285	0		
People-Prof=0	13.0	1.000	1,196	1,794	2,990	2,600		
Sub-total					7,525	2,600		1,578
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					8,278	2,860		1,736
Room 4-Toddlers 2 peaks (sensible) in August at 4pm, Air Handler 4 (Ahu-4), Zone 0, 430.2 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Roof-1-UP-Type:10	430	0.026	83	405	488		1.326	570
Wall-1-N-Type:7	123	0.052	71	106	177		2.652	327
Wall-2-W-Type:7	207	0.052	199	266	464		2.652	549
Gls-W-1-0%S	57.2	0.360	417	693	1,110		15.300	875
Unshaded Beam	57.2		0	2,260	2,260			
Lights-Prof=0	602	1.000	678	1,377	2,055			
Equipment-Prof=0	430	1.000	1,174	294	1,468	0		
People-Prof=0	16.0	1.000	1,472	2,208	3,680	3,200		

Room Detailed Loads (At Room Peak Times) (cont'd)

Load Description	Unit Quan	U.Fac/ Usage	Conv. S.Gain	Radiant S.Gain	Total S.Gain	Lat. Gain	Htg. Mult.	Htg. Loss
Sub-total					11,701	3,200		2,322
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					12,871	3,520		2,554

Room 5-Restroom 3 peaks (sensible) in August at 4pm, Air Handler 4 (Ahu-4), Zone 0, 50.0 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)

Roof-1-UP-Type:10	50	0.026	10	47	57		1.326	66
Wall-1-N-Type:7	75	0.052	44	64	108		2.652	199
Lights-Prof=0	70	1.000	79	160	239			
Equipment-Prof=0	50	1.000	136	34	171	0		
Sub-total					574	0		265
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					631	0		292

Room 6-Infants 3 peaks (sensible) in September at 3pm, Air Handler 4 (Ahu-4), Zone 0, 367.0 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)

Roof-1-UP-Type:10	367	0.026	63	284	346		1.326	487
Wall-1-W-Type:7	143	0.052	108	133	241		2.652	380
Wall-2-S-Type:7	170	0.052	124	182	306		2.652	450
Gls-W-1-0%S	46.9	0.360	303	471	774		15.300	717
Unshaded Beam	46.9		0	1,764	1,764			
Gls-S-1-0%S	30.4	0.360	171	287	458		15.300	465
Unshaded Beam	30.4		0	478	478			
Lights-Prof=0	514	1.000	579	1,175	1,753			
Equipment-Prof=0	367	1.000	1,002	250	1,252	0		
People-Prof=0	13.0	1.000	1,196	1,794	2,990	2,600		
Sub-total					10,363	2,600		2,498
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					11,399	2,860		2,748

Room 7-Infants 1 peaks (sensible) in December at 1pm, Air Handler 3 (Ahu-3), Zone 0, 366.0 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)

Wall-1-S-Type:7	162	0.052	77	76	153		2.652	430
Gls-S-1-0%S	30.4	0.360	90	107	197		15.300	465
Unshaded Beam	30.4		0	1,570	1,570			
Lights-Prof=0	512	1.000	577	1,171	1,748			
Equipment-Prof=0	366	1.000	999	250	1,249	0		
People-Prof=0	13.0	1.000	1,196	1,794	2,990	2,600		
Sub-total					7,908	2,600		895
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					8,698	2,860		984

Room Detailed Loads (At Room Peak Times) (cont'd)

Load Description	Unit Quan	U.Fac/ Usage	Conv. S.Gain	Radiant S.Gain	Total S.Gain	Lat. Gain	Htg. Mult.	Htg. Loss
Room 8-Reception peaks (sensible) in August at 8am, Air Handler 2 (Ahu-2), Zone 0, 268.2 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Wall-1-E-Type:7	119	0.052	54	64	118		2.652	315
Door-2-E-Type:7	48	0.052	22	26	48		2.652	127
Gls-E-1-0%S	30.4	0.360	166	204	370		15.300	465
Unshaded Beam	30.4		0	1,147	1,147			
Gls-E-1-0%S	25.5	0.360	140	172	311		15.300	391
Unshaded Beam	25.5		0	965	965			
Lights-Prof=0	376	1.000	423	858	1,281			
Equipment-Prof=0	268	1.000	732	183	915	0		
People-Prof=0	4.0	1.000	368	552	920	800		
Sub-total					6,075	800		1,297
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					6,683	880		1,427
Room 9-Restroom1 peaks (sensible) in August at 3pm, Air Handler 2 (Ahu-2), Zone 0, 50.0 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Roof-1-UP-Type:10	50	0.026	10	47	57		1.326	66
Lights-Prof=0	70	1.000	79	160	239			
Equipment-Prof=0	50	1.000	136	34	171	0		
Sub-total					467	0		66
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					513	0		73
Room 10-Corridor 2 peaks (sensible) in August at 4pm, Air Handler 2 (Ahu-2), Zone 0, 200.0 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Wall-1-S-Type:7	187	0.052	129	201	330		2.652	496
Wall-2-E-Type:7	54	0.052	32	51	83		2.652	143
Door-3-S-Type:7	18	0.052	12	19	32		2.652	48
Lights-Prof=0	280	1.000	315	640	955			
Equipment-Prof=0	200	1.000	546	136	682	0		
Sub-total					2,083	0		687
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					2,291	0		756
Room 11-Corridor 1 peaks (sensible) in December at 12am, Air Handler 3 (Ahu-3), Zone 0, 150.0 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Lights-Prof=0	210	1.000	236	480	717			
Equipment-Prof=0	150	1.000	409	102	512	0		
Sub-total					1,228	0		0
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					1,351	0		0

Room Detailed Loads (At Room Peak Times) (cont'd)

Load Description	Unit Quan	U.Fac/ Usage	Conv. S.Gain	Radiant S.Gain	Total S.Gain	Lat. Gain	Htg. Mult.	Htg. Loss
Room 12-Storage/Laundry peaks (sensible) in August at 4pm, Air Handler 1 (Ahu-1), Zone 0, 1,059.7 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Roof-1-UP-Type:10	1,059	0.026	204	996	1,200		1.326	1,404
Wall-1-E-Type:7	399	0.052	232	377	610		2.652	1,058
Wall-2-N-Type:7	173	0.052	100	149	249		2.652	460
Wall-3-S-Type:7	298	0.052	206	321	527		2.652	791
Wall-4-W-Type:7	251	0.052	241	322	563		2.652	666
Gls-W-1-0%S	30.9	0.360	225	374	599		15.300	472
Unshaded Beam	30.9		0	1,220	1,220			
Gls-E-1-0%S	61.2	0.360	341	614	955		15.300	937
Unshaded Beam	61.2		0	133	133			
Gls-E-1-0%S	3.8	0.360	21	38	59		15.300	58
Unshaded Beam	3.8		0	8	8			
Gls-E-1-0%S	35.9	0.360	200	360	560		15.300	550
Unshaded Beam	35.9		0	78	78			
Lights-Prof=0	1,484	1.000	1,670	3,392	5,062			
Equipment-Prof=0	600	1.000	1,638	409	2,047	0		
Sub-total					13,869	0		6,396
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					15,256	0		7,035
Room 13-Janitor peaks (sensible) in August at 3pm, Air Handler 1 (Ahu-1), Zone 0, 24.0 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Roof-1-UP-Type:10	24	0.026	5	23	27		1.326	32
Wall-1-S-Type:7	35	0.052	25	37	62		2.652	93
Lights-Prof=0	34	1.000	38	77	115			
Equipment-Prof=0	24	1.000	66	16	82	0		
Sub-total					286	0		125
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					315	0		137
Room 14-Restroom 4 peaks (sensible) in August at 9am, Air Handler 1 (Ahu-1), Zone 0, 54.7 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Roof-1-UP-Type:10	55	0.026	4	12	16		1.326	73
Wall-1-E-Type:7	50	0.052	30	36	66		2.652	132
Wall-2-S-Type:7	80	0.052	17	24	41		2.652	212
Gls-E-1-0%S	15.3	0.360	93	123	216		15.300	234
Unshaded Beam	15.3		0	530	530			
Lights-Prof=0	77	1.000	86	175	261			
Equipment-Prof=0	55	1.000	149	37	187	0		
Sub-total					1,317	0		651
Safety factors:					+10%	+10%		+10%
Total w/ safety factors:					1,449	0		716

Room Detailed Loads (At Room Peak Times) (cont'd)

Load Description	Unit Quan	U.Fac/ Usage	Conv. S.Gain	Radiant S.Gain	Total S.Gain	Lat. Gain	Htg. Mult.	Htg. Loss
Room 15-Mecahnical Room peaks (sensible) in August at 5pm, Air Handler 1 (Ahu-1), Zone 0, 250.0 x 1.0, Construction Type: 1 (Exterior, Light Construction, With Carpet, 10% Glass)								
Roof-1-UP-Type:10	250	0.026	42	223	265		1.326	332
Wall-1-N-Type:7	153	0.052	88	136	223		2.652	405
Wall-2-W-Type:7	273	0.052	273	388	661		2.652	724
Lights-Prof=0	350	1.000	394	800	1,194			
Equipment-Prof=0	250	1.000	682	171	853	0		
Sub-total					3,196	0		1,461
Safety factors:					+10%	+10%		+10%
					---	---		---
Total w/ safety factors:					3,516	0		1,607

COMcheck Software Version 4.1.5.3

Envelope Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Sun Moon and Stars Learning Center
Location:	Austin, Texas
Climate Zone:	2a
Project Type:	New Construction
Vertical Glazing / Wall Area:	8%

Construction Site:
3808 South 1st Street
Austin, TX 78704

Owner/Agent:

Designer/Contractor:

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Enhanced Interior Lighting Controls, 1.0 credit

Building Area	Floor Area
1-School/University : Nonresidential	3599

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Floor 1: Slab-On-Grade:Unheated, [Bldg. Use 1 - School/University] (c)	226	---	---	0.730	0.730
Floor 2: Concrete Floor (over unconditioned space), [Bldg. Use 1 - School/University]	1137	---	7.5	0.094	0.107
Roof: Attic Roof with Wood Joists, [Bldg. Use 1 - School/University]	2955	38.0	0.0	0.027	0.027
NORTH					
Right Exterior Wall: Wood-Framed, 16" o.c., [Bldg. Use 1 - School/University]	1252	19.0	0.0	0.067	0.064
Window - fixed: Metal Frame:Fixed, Perf. Specs.: Product ID na, SHGC 0.25, [Bldg. Use 1 - School/University] (b)	30	---	---	0.500	0.500
Window - sh: Metal Frame:Operable, Perf. Specs.: Product ID na, SHGC 0.25, [Bldg. Use 1 - School/University] (b)	15	---	---	0.500	0.650
EAST					
Front Exterior Wall: Wood-Framed, 16" o.c., [Bldg. Use 1 - School/University]	1319	19.0	0.0	0.067	0.064
Window - fixed: Metal Frame:Fixed, Perf. Specs.: Product ID na, SHGC 0.25, [Bldg. Use 1 - School/University] (b)	203	---	---	0.500	0.500
Window - sh: Metal Frame:Operable, Perf. Specs.: Product ID na, SHGC 0.25, [Bldg. Use 1 - School/University] (b)	36	---	---	0.500	0.650
Door 1: Glass (> 50% glazing):Nonmetal Frame, Entrance Door, Perf. Specs.: Product ID na, SHGC 0.25, [Bldg. Use 1 - School/University] (b)	52	---	---	0.500	0.830
SOUTH					
Left Exterior Wall: Wood-Framed, 16" o.c., [Bldg. Use 1 - School/University]	1252	19.0	0.0	0.067	0.064
Window - fixed: Metal Frame:Fixed, Perf. Specs.: Product ID na, SHGC 0.25, [Bldg. Use 1 - School/University] (b)	30	---	---	0.500	0.500

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Window - sh: Metal Frame:Operable, Perf. Specs.: Product ID na, SHGC 0.25, [Bldg. Use 1 - School/University] (b)	30	---	---	0.500	0.650
Door 2: Insulated Metal, Swinging, [Bldg. Use 1 - School/University]	21	---	---	0.650	0.610
Door 3: Glass (> 50% glazing):Nonmetal Frame, Non-Entrance Door, Perf. Specs.: Product ID na, SHGC 0.25, [Bldg. Use 1 - School/University] (b)	1	---	---	0.500	0.650
Door 4: Glass (> 50% glazing):Nonmetal Frame, Non-Entrance Door, Perf. Specs.: Product ID na, SHGC 0.25, [Bldg. Use 1 - School/University] (b)	1	---	---	0.500	0.650
WEST					
Rear Exterior Wall: Wood-Framed, 16" o.c., [Bldg. Use 1 - School/University]	1319	19.0	0.0	0.067	0.064

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.

(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 3% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COM*check* Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Stephen Hampton, Architect		03/03/2022
Name - Title	Signature	Date

REGISTERED ARCHITECT
STEPHEN J. HAMPTON
25489
STATE OF TEXAS

COM*check* Software Version 4.1.5.3

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR1][1]	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.1 [PR10][1]	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.1 [PR11][1]	The skylight area <= 3 percent of the gross roof area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.2 [PR14][1]	In enclosed spaces > 2,500 ft2 directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.2 [FO4][2]	Slab edge insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2.1 [FO6][1]	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [FO3][2]	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.4 [FO7][2]	Slab edge insulation depth/length. Slab insulation extending away from building is covered by pavement or >= 10 inches of soil.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.6 [FO12][3]	Radiant heating systems panels insulated to >=R-3.5 on face opposite space being heated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C303.1.3 [FR12][2]	Fenestration products rated in accordance with NFRC.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.1.3 [FR13][1]	Fenestration products are certified as to performance labels or certificates provided.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.3 [FR10][1]	Vertical fenestration SHGC value.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.4.3, C402.4.3.4 [FR8][1]	Vertical fenestration U-Factor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.4.4 [FR14][2]	U-factor of opaque doors associated with the building thermal envelope meets requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1 [FR16][1]	The building envelope contains a continuous air barrier that is sealed in an approved manner and either constructed or tested in an approved manner. Air barrier penetrations are sealed in an approved manner.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.2, C402.5.4 [FR18][3]	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.5.5, C403.2.4.3 [ME3][3]	Stair and elevator shaft vents have motorized dampers that automatically close. Refernece section C403.7.7 for operational details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.6 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8.2, C405.8.2.1 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

Section # & Req.ID	Insulation Inspection	Complies?	Comments/Assumptions
C303.1 [IN3][1]	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the roof slope is <=3 in 12.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.2.1 [IN20][1]	Insulation installed on a suspended ceiling having ceiling tiles is not being specified for roor/ceiling assemblies. Continuous insulation board installed in 2 or more layers with edge joints offset between layers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.1 [IN10][2]	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2 [IN7][1]	Above-grade wall insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2, C402.2.4 [IN9][2]	Floor insulation installed per manufacturer's instructions. Cavity or structural slab insulation installed in permanent contact with underside of decking or structural slabs.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2.1 [IN14][2]	Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [IN6][1]	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.3 [IN8][2]	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.6 [IN18][3]	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.3 [IN5][3]	High-albedo roofs satisfy one of the following: 3-year-aged solar reflectance >= 0.55 and thermal emittance >= 0.75 or 3-year-aged solar reflectance index >= 64.0.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C105 [IN2][1]	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1.1 [IN1][1]	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C402.5.6 [FI37][1]	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.6 [FI37][1]	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.6 [FI37][1]	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.6 [FI37][1]	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406.4 [FI54][1]	Enhanced digital lighting controls efficiency package: Interior lighting has following enhanced lighting controls in accordance with Section C405.2.2: Luminaires capable of continuous dimming and being addressed individually, <= 8 luminaires controlled in combination in a daylight zone, digital control system for fixtures, "Sequence of Operations" documentation, and functional testing per Section C408.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

COM*check* Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 90.1 (2019) Standard
Project Title: Sun Moon Stars Day Care
Project Type: New Construction

Construction Site:
3808 S 1st Street
Austin, Texas 78704

Owner/Agent:

Designer/Contractor:

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-School/University	4166	0.72	3000
		Total Allowed Watts =	3000

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-School/University				
LED: A: Other:	1	88	15	1294
LED: WE: Other:	1	1	18	18
		Total Proposed Watts =		1312

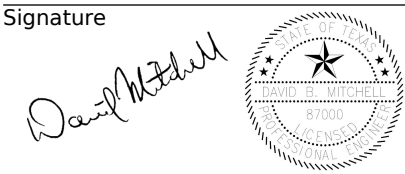
Interior Lighting PASSES: Design 56% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 90.1 (2019) Standard requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

David Mitchell - PE
Name - Title

Signature



12/23/2021
Date

COM*check* Software Version COMcheckWeb
Exterior Lighting Compliance Certificate

Project Information

Energy Code:	90.1 (2019) Standard
Project Title:	Sun Moon Stars Day Care
Project Type:	New Construction
Exterior Lighting Zone	2 (Residentially zoned area (LZ2))

Construction Site:
3808 S 1st Street
Austin, Texas 78704

Owner/Agent:

Designer/Contractor:

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Entry canopy	50 ft2	0.25	Yes	12
Illuminated area of facade wall or surface	46 ft2	0.1	No	5
			Total Tradable Watts (a) =	12
			Total Allowed Watts =	17
			Total Allowed Supplemental Watts (b) =	400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Entry canopy (50 ft2): Tradable Wattage				
LED: W: Other:	1	3	18	54
Illuminated area of facade wall or surface (46 ft2): Non-tradable Wattage				
LED: W: Other:	1	3	18	54
			Total Tradable Proposed Watts =	54

Exterior Lighting PASSES: Design 85% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 90.1 (2019) Standard requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

David Mitchell - PE — Name - Title

Signature

12/23/2021 — Date

COM*check* Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code:	90.1 (2019) Standard
Project Title:	Sun Moon Stars Day Care
Location:	Austin, Texas
Climate Zone:	2a
Project Type:	New Construction

Construction Site:
3808 S 1st Street
Austin, Texas 78704

Owner/Agent:

Designer/Contractor:

Mechanical Systems List

Quantity	System Type & Description
1	HVAC System (Single Zone): Split System Heat Pump Heating Mode: Capacity = 27 kBtu/h, Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 28 kBtu/h, Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER
3	HVAC System (Single Zone): Split System Heat Pump Heating Mode: Capacity = 58 kBtu/h, Proposed Efficiency = 9.50 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 54 kBtu/h, , Air Economizer Proposed Efficiency = 15.50 SEER, Required Efficiency: 14.00 SEER

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2019) Standard requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

David Mitchell - PE		12/23/2021
Name - Title	Signature	Date

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 90.1 (2019) Standard

Requirements: 0.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 5.4.3.1.1, 5.7 [PR1][1]	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
4.2.2, 6.4.4.2.1, 6.7.2 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
4.2.2, 9.4.3, 9.7 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
4.2.5.2 [PR5][1]	Commissioning shall be performed as stated in Sections 5.9.2, 6.9.2, 7.9.2, 8.9.2, 9.9.2, 10.9.2, 11.2(d), and G1.2.1(c). Commissioning must utilize ASHRAE/IES Standard 202 or other generally accepted engineering standards acceptable to the building official. FPT and verification requirements for commissioning are as stated in Section 4.2.5.1. Commissioning shall document compliance of the building systems, controls, and building envelope with required provisions of this standard. Commissioning requirements shall be incorporated into the construction documents.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
5.5.4.2.3 [PR7][2]	In buildings > 2,500 ft2, any enclosed spaces directly under a roof with ceiling heights > 15 ft. and used as an office, lobby, atrium, concourse, corridor, storage (including nonrefrigerated warehouse), gymnasium, fitness/exercise area, playing area, gymnasium seating area, convention exhibit/event space, courtroom, automotive service, fire station engine room, manufacturing corridor/transition and bay areas, retail, library reading and stack areas, distribution/sorting area, transportation baggage and seating areas, or workshop, the following requirements apply: The daylight zone under skylights is >= half the floor area and (a) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40 or (b) the minimum skylight effective aperture >= 1 percent. The skylights have a measured haze value > 90 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.7 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Footing / Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
4.2.4 [FO1][2]	Installed below-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-_____	R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
4.2.4 [FO3][2]	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-_____ ☐ Unheated ☐ Heated	R-_____ ☐ Unheated ☐ Heated	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.5.3.5 [FO5][2]	Slab edge insulation depth/length.	_____ ft	_____ ft	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.7 [FO6][1]	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.7.3 [FO7][1]	Insulation in contact with the ground has <=0.3% water absorption rate per ASTM C272.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.7 [FO9][3]	Freeze protection and snow/ice melting system sensors for future connection to controls.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.4.2 [FR1][3]	Factory-built and site-assembled fenestration and doors are labeled or certified as meeting air leakage requirements.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.5.4.3a [FR8][1]	Vertical fenestration U-Factor.	U-____	U-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.5.4.3b [FR9][1]	Skylight fenestration U-Factor.	U-____	U-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.5.4.4.1 [FR10][1]	Vertical fenestration SHGC value.	SHGC:____	SHGC:____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.5.4.4.2 [FR11][1]	Skylight SHGC value.	SHGC:____	SHGC:____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.2.1, 5.8.2.3, 5.8.2.4, 5.8.2.5 [FR12][2]	Fenestration products rated (U-factor, SHGC, and VT) in accordance with NFRC or energy code defaults are used.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.2.2 [FR13][1]	Fenestration and door products are labeled, or a signed and dated certificate listing the U-factor, SHGC, VT, and air leakage rate has been provided by the manufacturer.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.5.3.6 [FR14][2]	U-factor of opaque doors associated with the building thermal envelope meets requirements.	U-____ ☐ Swinging ☐ Nonswinging	U-____ ☐ Swinging ☐ Nonswinging	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.4.3.1 [FR15][1]	Continuous air barrier is wrapped, sealed, caulked, gasketed, and/or taped in an approved manner, except in semiheated spaces in climate zones 1-6.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.1.4, 6.4.1.5 [ME1][2]	HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.	Efficiency:_____	Efficiency:_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
6.4.3.4.1 [ME3][3]	Stair and elevator shaft vents have motorized dampers that automatically close.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.4.5 [ME39][3]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.4.4 [ME5][3]	Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.8 [ME6][1]	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.3.2.1 [ME40][2]	DX cooling systems >= 75 kBtu/h (>= 65 kBtu/h effective 1/2016) and chilled-water and evaporative cooling fan motor hp >= ¼ designed to vary supply fan airflow as a function of load and comply with operational requirements.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
6.4.4.1.1 [ME7][3]	Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.4.1.2 [ME8][2]	HVAC ducts and plenums insulated per Table 6.8.2. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	R-_____	R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.4.1.3 [ME9][2]	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	_____ in.	_____ in.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.4.1.4 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.4.2.1 [ME10][2]	Ducts and plenums having pressure class ratings are Seal Class A construction.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.4.2.2 [ME11][3]	Ductwork operating >3 in. water column requires air leakage testing.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.4.2.2 [ME11][3]	Ductwork operating >3 in. water column requires air leakage testing.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.3 [ME19][3]	Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.4.1 [ME68][3]	Humidifiers with airstream mounted preheating jackets have preheat auto-shutoff value set to activate when humidification is not required.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.4.2 [ME69][3]	Humidification system dispersion tube hot surfaces in the airstreams of ducts or air-handling units insulated >= R-0.5.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.5 [ME70][3]	Preheat coils controlled to stop heat output whenever mechanical cooling, including economizer operation, is active.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.6 [ME106][3]	Units that provide ventilation air to multiple zones and operate in conjunction with zone heating and cooling systems are prevented from using heating or heat recovery to warm supply air above 60°F when representative building loads or outdoor air temperature indicate that most zones demand cooling.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.3.3 [ME42][3]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
6.5.3.3 [ME42][3]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
6.5.4.2 [ME25][3]	HVAC pumping systems with >= 3 control values designed for variable fluid flow (see section details).			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.6.1.1 [ME56][1]	Exhaust Air Energy Recovery for Nontransient Dwelling Units			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.5.6.1.2 [ME111][1]	Exhaust air energy recovery for spaces other than Nontransient dwelling units meeting Tables 6.5.6.1.2-1, and 6.5.6.1.2-2.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.7.2.1 [ME32][2]	Kitchen hoods >5,000 cfm have make up air >=50% of exhaust air volume.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.3.8 [ME112][1]	Occupied standy controls for zones serving rooms that are required to have automatic partial OFF or automatic full OFF lighting controls per Section 9.4.1.1 shall meet the following within five minutes of all rooms in that zone entering occupied-standby mode: a)Active heating set point shall be setback at least 1°F, b)Active cooling set point shall be setup at least 1°F and c)All airflow supplied to the zone shall be shut off whenever the space temperature is between the active heating and cooling set points.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.7.2.4 [ME49][3]	Approved field test used to evaluate design air flow rates and demonstrate proper capture and containment of kitchen exhaust systems.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.8.1 [ME34][2]	Unenclosed spaces that are heated use only radiant heat.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.9 [ME63][2]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.10 [ME73][3]	Doors separating conditioned space from the outdoors have controls that disable/reset heating and cooling system when open.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
9.4.1.1 [EL1][2]	Automatic control requirements prescribed in Table 9.6.1, for the appropriate space type, are installed. Mandatory lighting controls (labeled as 'REQ') and optional choice controls (labeled as 'ADD1' and 'ADD2') are implemented.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1a [EL2][2]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1b [EL26][2]	No lighting shall be automatically turned on - restriced to manual.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1c [EL27][2]	<= 50% of general lighting power shall be allowed to be automatically turned on.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1d [EL28][2]	Bilevel lighting control - <= 50% of general lighting controlled with one intermediate step between full off and full on.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1e [EL29][2]	Automatic daylight responsive controls for sidelighting >= 150 watts controlled by photocontrols.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1f [EL30][2]	Automatic daylight responsive controls for toplighting >= 150 watts controlled by photocontrols.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1g [EL31][2]	Automatic partial OFF: lighting shall be reduced >= 50% within 20 minutes of zero occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1h [EL32][2]	Automatic full OFF: lighting shall be shut off within 20 minutes of zero occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1i [EL33][2]	Scheduled shutoff: all lighting shall be shut off when scheduled to be unoccupied.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.3 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.4 [EL3][2]	Automatic lighting controls for exterior lighting installed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
9.6.2 [EL8][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
10.4.1 [EL9][2]	Electric motors meet requirements where applicable.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
4.2.4 [IN2][1]	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	R-_____ ☐ Above deck ☐ Metal ☐ Attic	R-_____ ☐ Above deck ☐ Metal ☐ Attic	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.2, 5.8.1.3 [IN3][1]	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the ceiling slope is <= 3:12.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
4.2.4 [IN6][1]	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-_____ ☐ Mass ☐ Metal ☐ Steel ☐ Wood	R-_____ ☐ Mass ☐ Metal ☐ Steel ☐ Wood	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.2 [IN7][1]	Above-grade wall insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
4.2.4 [IN8][2]	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-_____ ☐ Mass ☐ Steel ☐ Wood	R-_____ ☐ Mass ☐ Steel ☐ Wood	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.1 [IN10][2]	Building envelope insulation is labeled with R-value or insulation certificate has been provided listing R-value and other relevant data.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.9 [IN18][2]	Building envelope insulation extends over the full area of the component at the proposed rated R or U value.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.4 [IN11][2]	Eaves are baffled to deflect air to above the insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.5 [IN12][2]	Insulation is installed in substantial contact with the inside surface separating conditioned space from unconditional space.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.6 [IN13][2]	Recessed equipment installed in building envelope assemblies does not compress the adjacent insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.7.1 [IN15][2]	Attics and mechanical rooms have insulation protected where adjacent to attic or equipment access.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.8.1.7.2 [IN16][2]	Foundation vents do not interfere with insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.8 [IN17][3]	Insulation intended to meet the roof insulation requirements cannot be installed on top of a suspended ceiling. Mark this requirement compliant if insulation is installed accordingly.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
5.4.3.2 [FI1][1]	Weatherseals installed on all loading dock cargo doors in Climate Zones 4-8.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.1.2 [FI3][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.2 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.3.1 [FI21][3]	HVAC systems equipped with at least one automatic shutdown control.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.3.2 [FI22][3]	Setback controls allow automatic restart and temporary operation as required for maintenance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.5 [FI5][3]	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.5 [FI5][3]	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.12 [FI200][3]	Air economizer has a fault detection and diagnostics (FDD) system (see details for configuration and operational requirements).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.6 [FI6][3]	When humidification and dehumidification are provided to a zone, simultaneous operation is prohibited. Humidity control prohibits the use of fossil fuel or electricity to produce RH > 30% in the warmest zone humidified and RH < 60% in the coldest zone dehumidified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.7.2.1 [FI7][3]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.7.2.2 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.7.2.3 [FI9][1]	An air and/or hydronic system balancing report is provided for HVAC systems serving zones >5,000 ft2 of conditioned area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
8.7.1 [FI16][3]	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
8.7.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.2.2.3 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
9.4.2 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
9.4.4 [FI20][1]	At least 75% of all permanently installed lighting fixtures in dwelling units have >= 55 lm/W efficacy or a >= 45 lm/W total luminaire efficacy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
10.4.3 [FI24][2]	Elevators are designed with the proper lighting, ventilation power, and standby mode.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)