



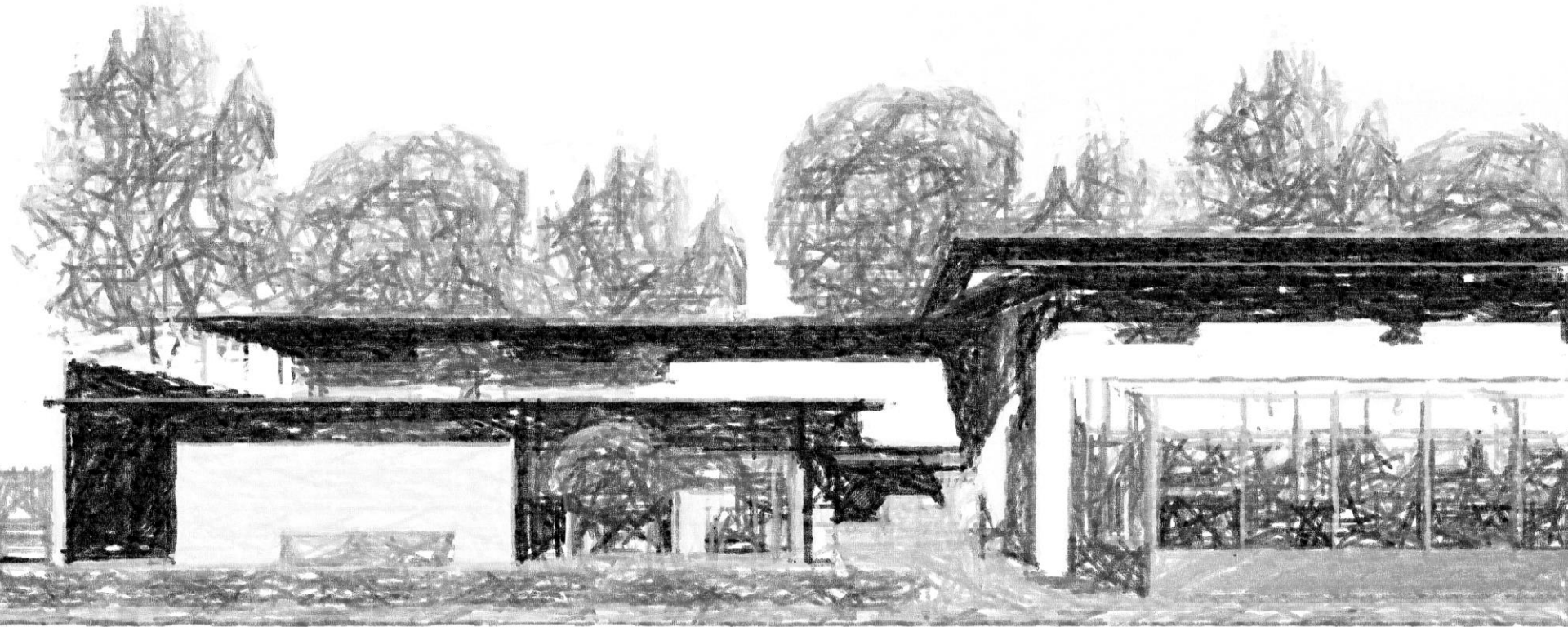
STATE UNIVERSITY OF NEW YORK
COLLEGE OF ENVIRONMENTAL
SCIENCE AND FORESTRY

SYRACUSE UNIVERSITY

OUR HOME AT SMOKEY HOLLOW

“The architect’s role is to fight for a better world, where he (they) can produce an architecture that serves everyone and not just a group of privileged people.”

- Oscar Niemeyer





0.9% of New York Students have ASD



Based on that percentage, there are roughly 144,000 adults aged 21+ in New York State diagnosed with ASD







OUR HOME AT SMOKEY HOLLOW



Christopher Community, Inc.

Christopher Community Inc.

Currently manages over 3,000 units and more than 100 buildings. They also specialize in low- and moderate-income developments.



Autistic Service Inc.
Williamsville, NY

CIP Amherst
Amherst, NY

Syracuse

Center for Discovery
Harris, NY

SustainAbility Services
Accord, NY

Developmental Disabilities Institute
Smithtown, NY

The nearest ASD assisted living community is
114 miles away from Syracuse



Maggie and her dad,
Dan Schmidt



Mike and his mom,
Trish Albanese



Fig. 1. ADHD & Autism, n.d.



Dr. Andy Lopez-Williams



Quinlan Hooker
Energy Lead



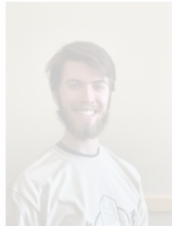
Connor Young
Engineering Lead



Vedyun Mishra
Architecture Lead



Nathaniel Hengy
Finance Lead



Christopher Carrano
Director of Operations



Noah Townsend
Team Lead



Ryan Badke
Team Lead



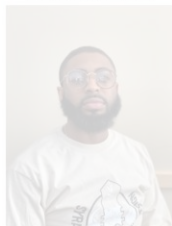
Heather Warren



Jean-Claude Rigano



Darrelle Butler Jr.



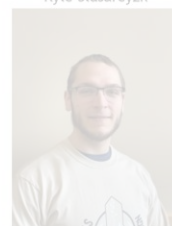
Roman Hyronvets



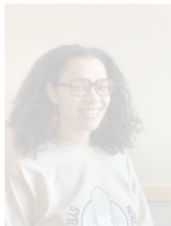
Sena Gokkus



Kyle Slusarczyk



Nikita Richardson



Carol Pacheco



Erin Englehart



Aditya Surendhra



Trisha Gupta



Lucas Pharmer





Puzzle Pieces:

Residents with ASD

Home Border:

Durability & Sensory Safe Design

Green Circle:

Net-Zero Energy Goals

Hands:

Health & Wellbeing

Plant:

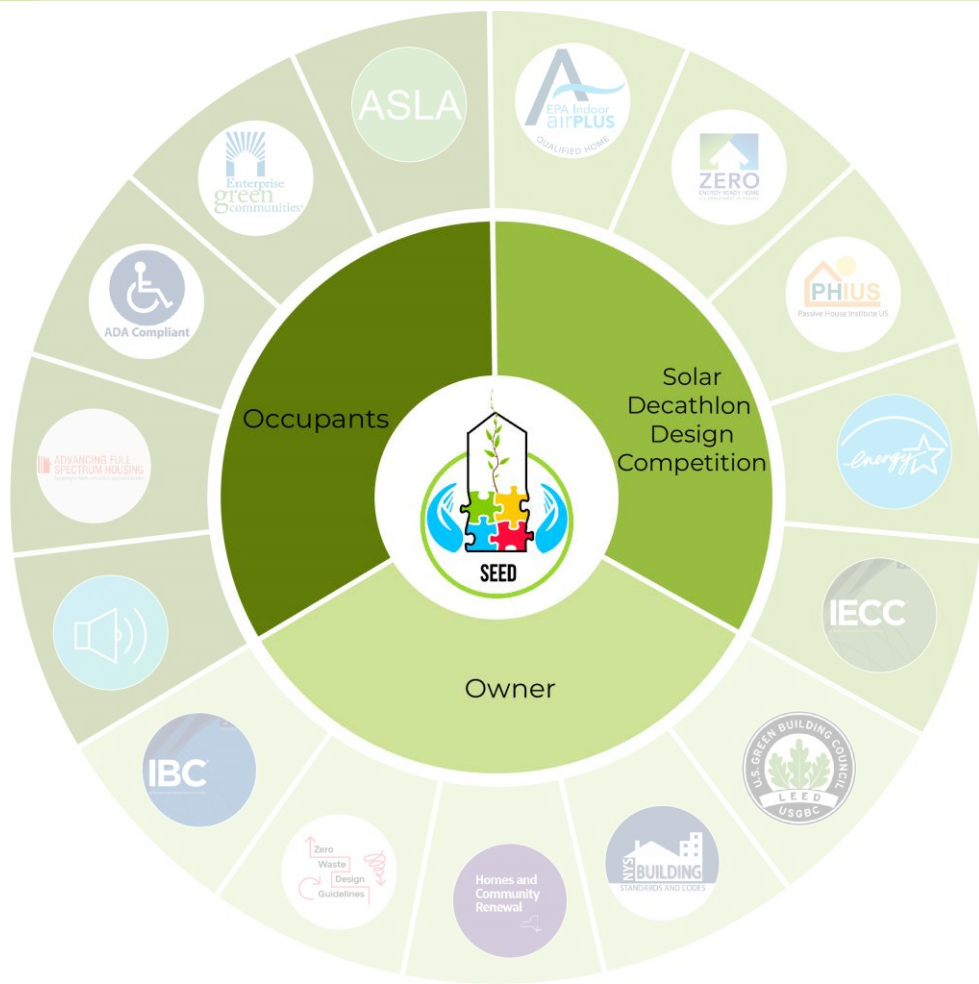
Biophilic Design



ISSUES

OUR GOALS

INTRODUCTION





OUR HOME AT SMOKEY HOLLOW



WIND WHEEL

LOCATION: Syracuse Hancock Intl Arpt, NY, USA
Latitude/Longitude: 43.12° North, 76.1° West, **Time Zone from Greenwich -5**
Data Source: TMY3 725190 WMO Station Number, **Elevation 410 ft**

LEGEND

TEMPERATURE (Deg. F)

- < 32
- 32 - 69
- 69 - 81
- 81 - 100
- > 100

RELATIVE HUMIDITY (%)

- <30
- 30-70
- >70

☒ All Hours ☐ Selected Hours
1 a.m. through midnight

☒ All Months ☐ Selected Months
JAN through DEC

☐ One Month JAN Next Month
☐ One Day 1 Next Day

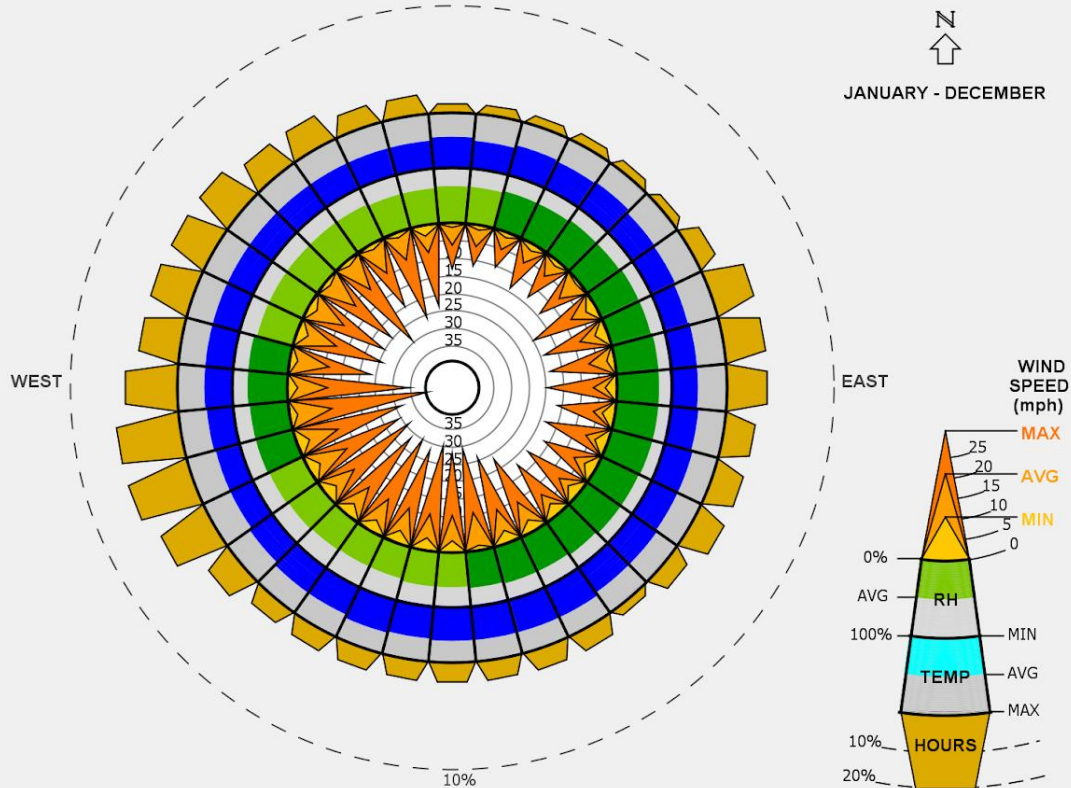
Animate

- ☒ Monthly
- ☐ Daily
- ☐ Hourly

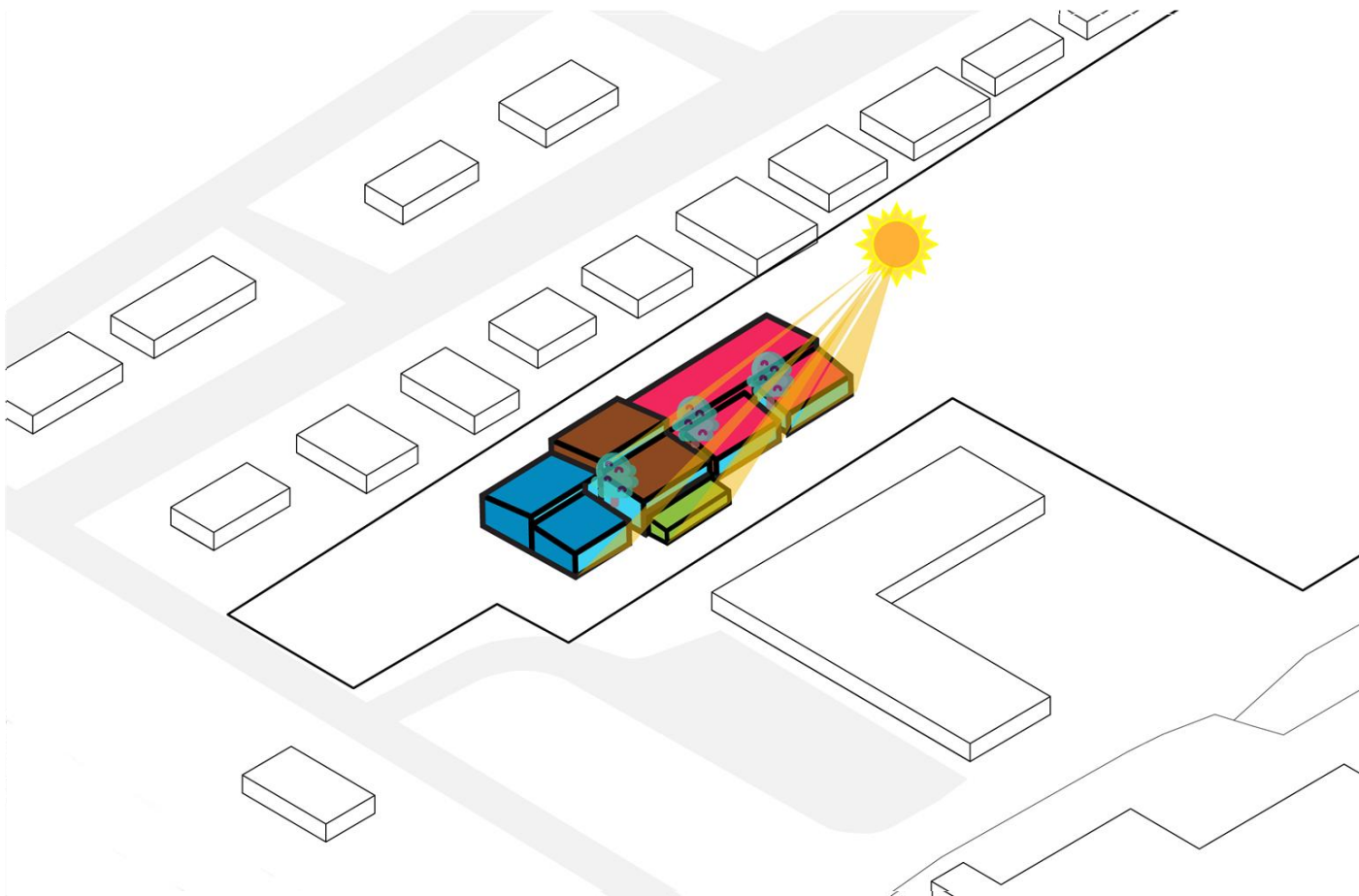
Start

Pause

Stop









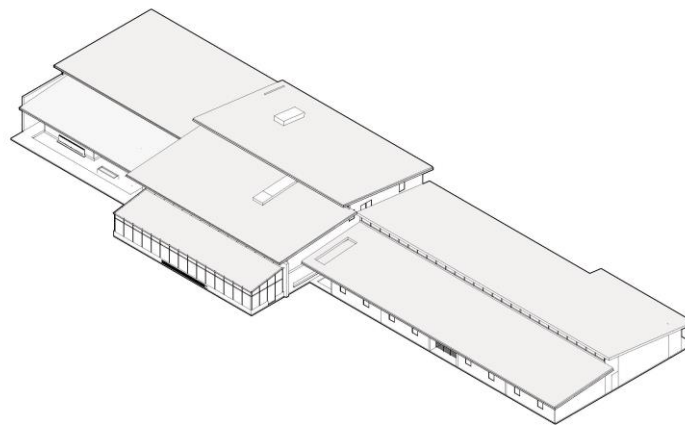
Ample Daylighting



Greenhouse for Healing



100% Water Reuse



Open Spaces



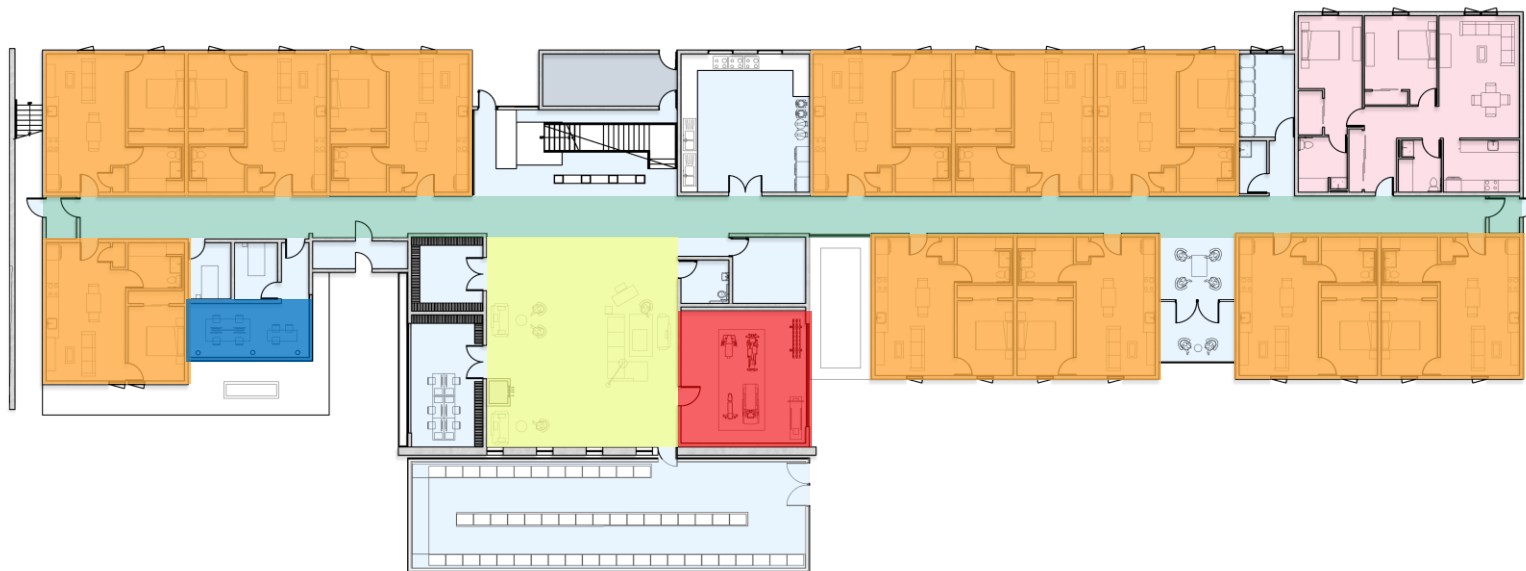
Therapeutic Landscape



Autism Guidelines

DESIGN ELEMENTS

ARCHITECTURE



1 Bedroom Units 2 Bedroom Units Common Spaces Mechanical Space



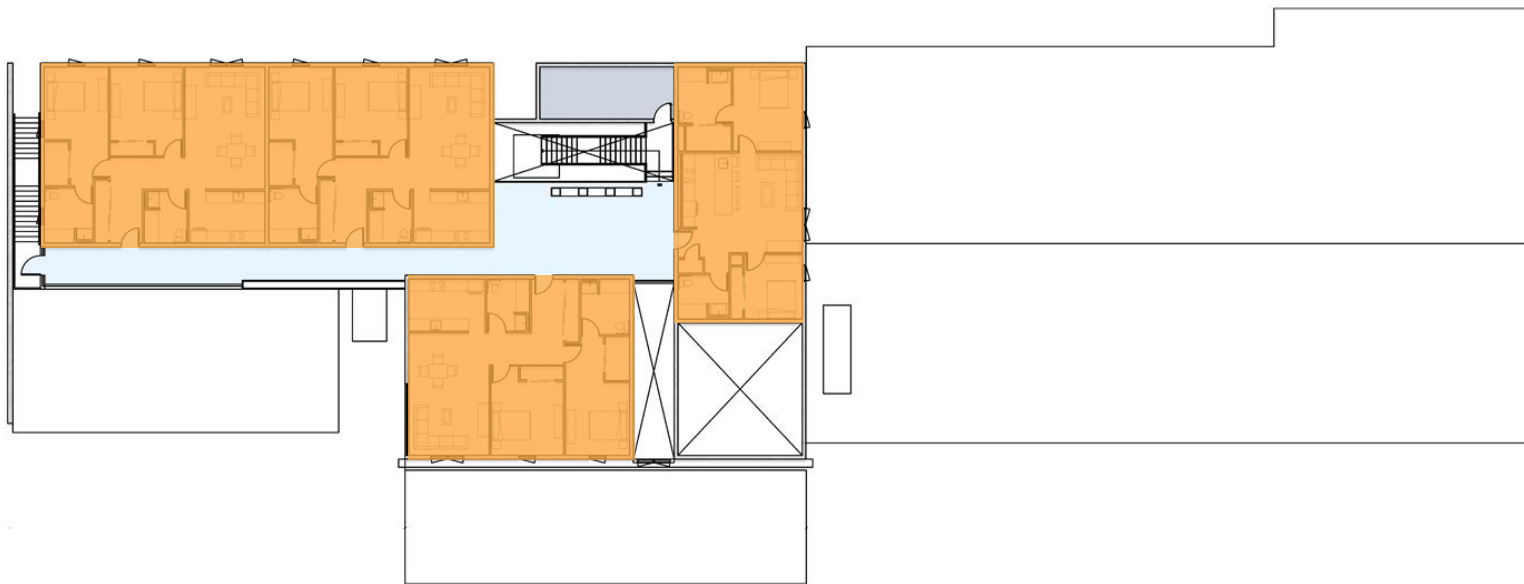
ADA-IT
Layout



Minimalistic
Design



Family and
Stability



1 Bedroom Units



2 Bedroom Units



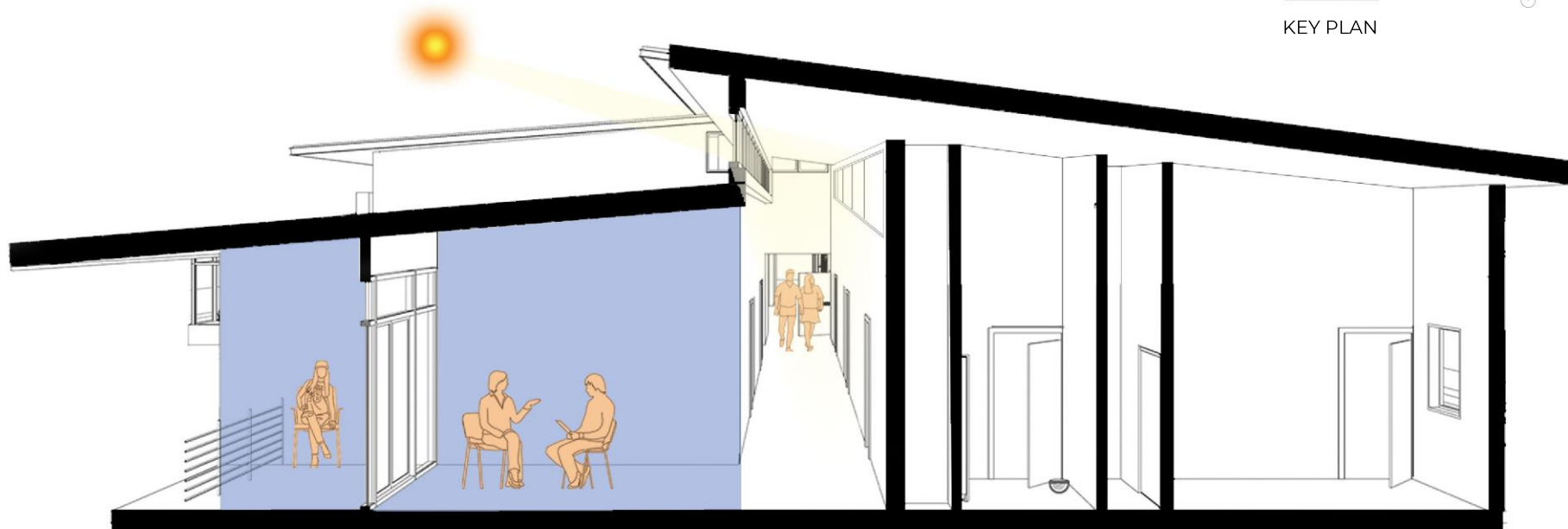
Common Spaces

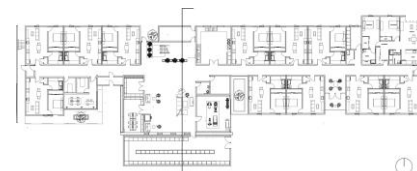


Mechanical Space

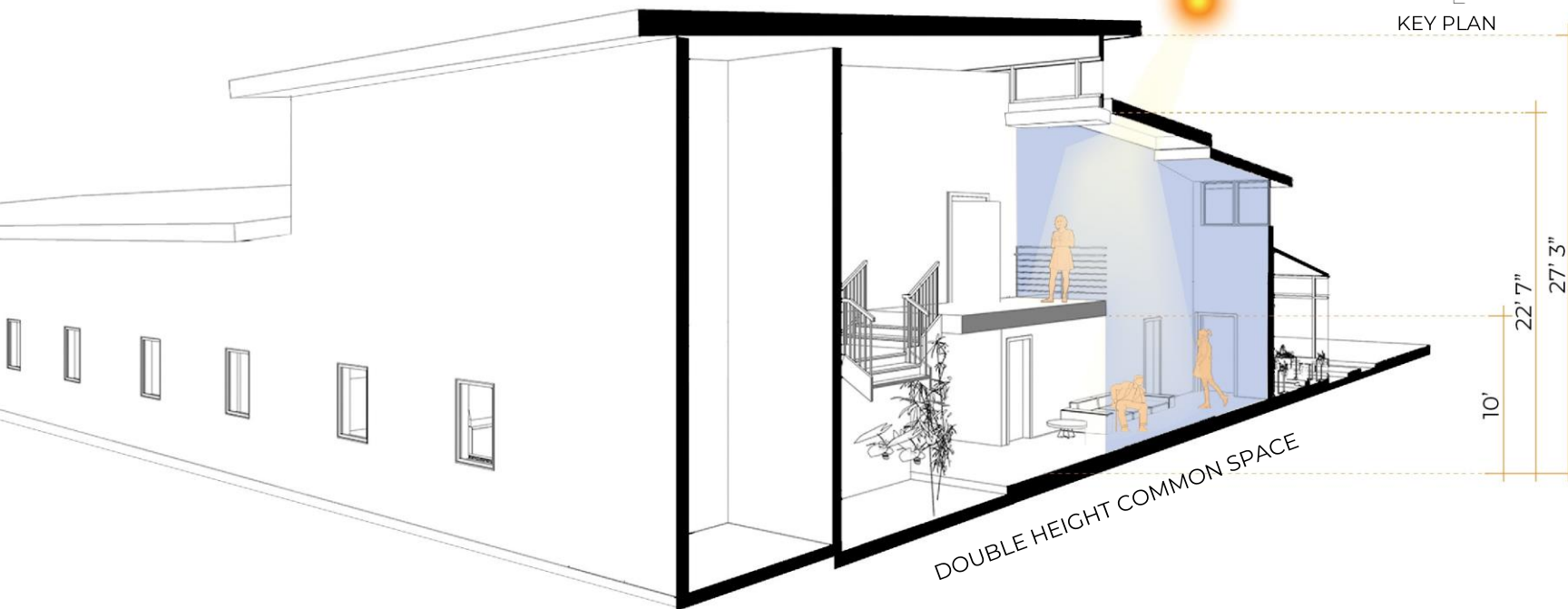


KEY PLAN





KEY PLAN

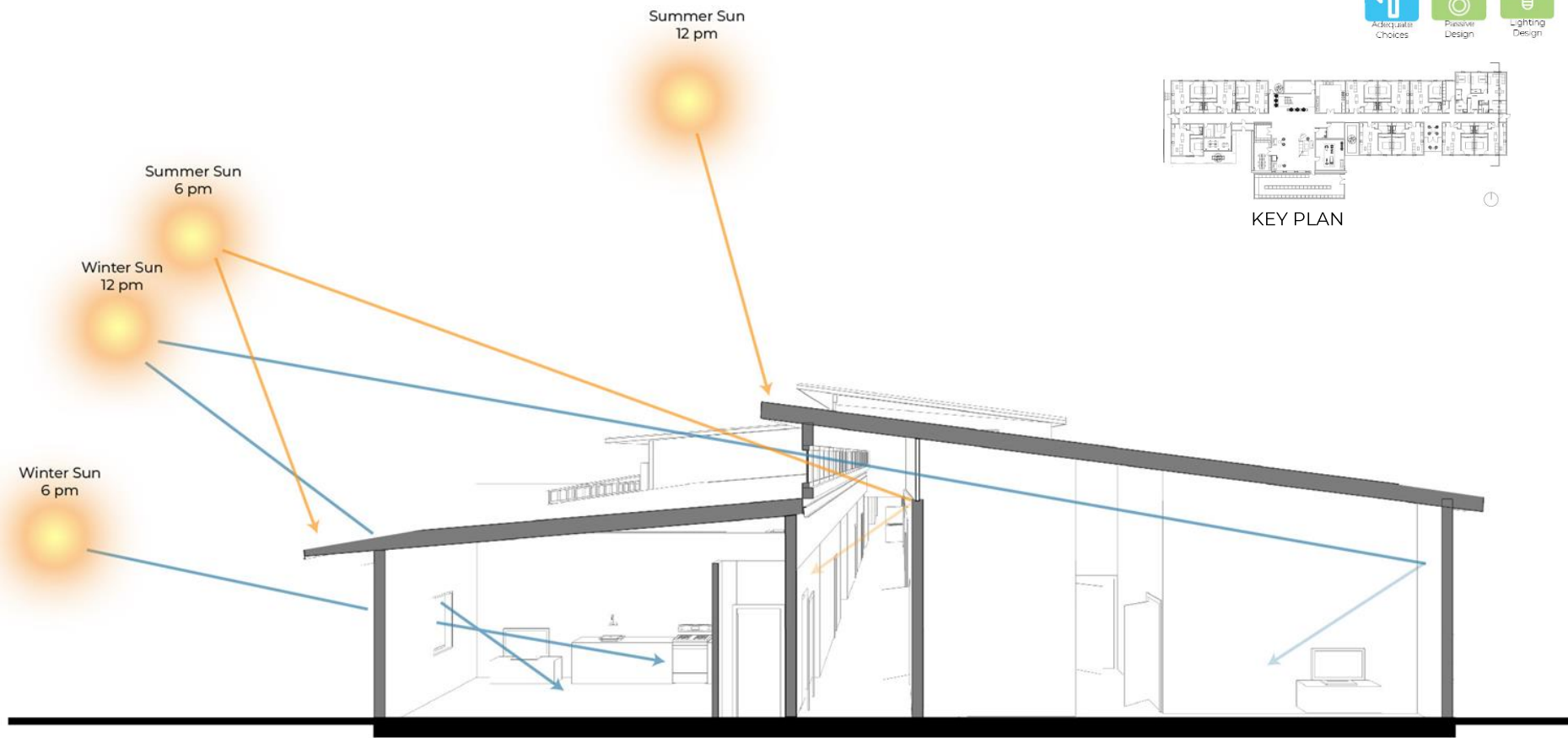


DOUBLE HEIGHT COMMON SPACE



GREENHOUSE

ARCHITECTURE



KEY PLAN



Adequacy
Choices



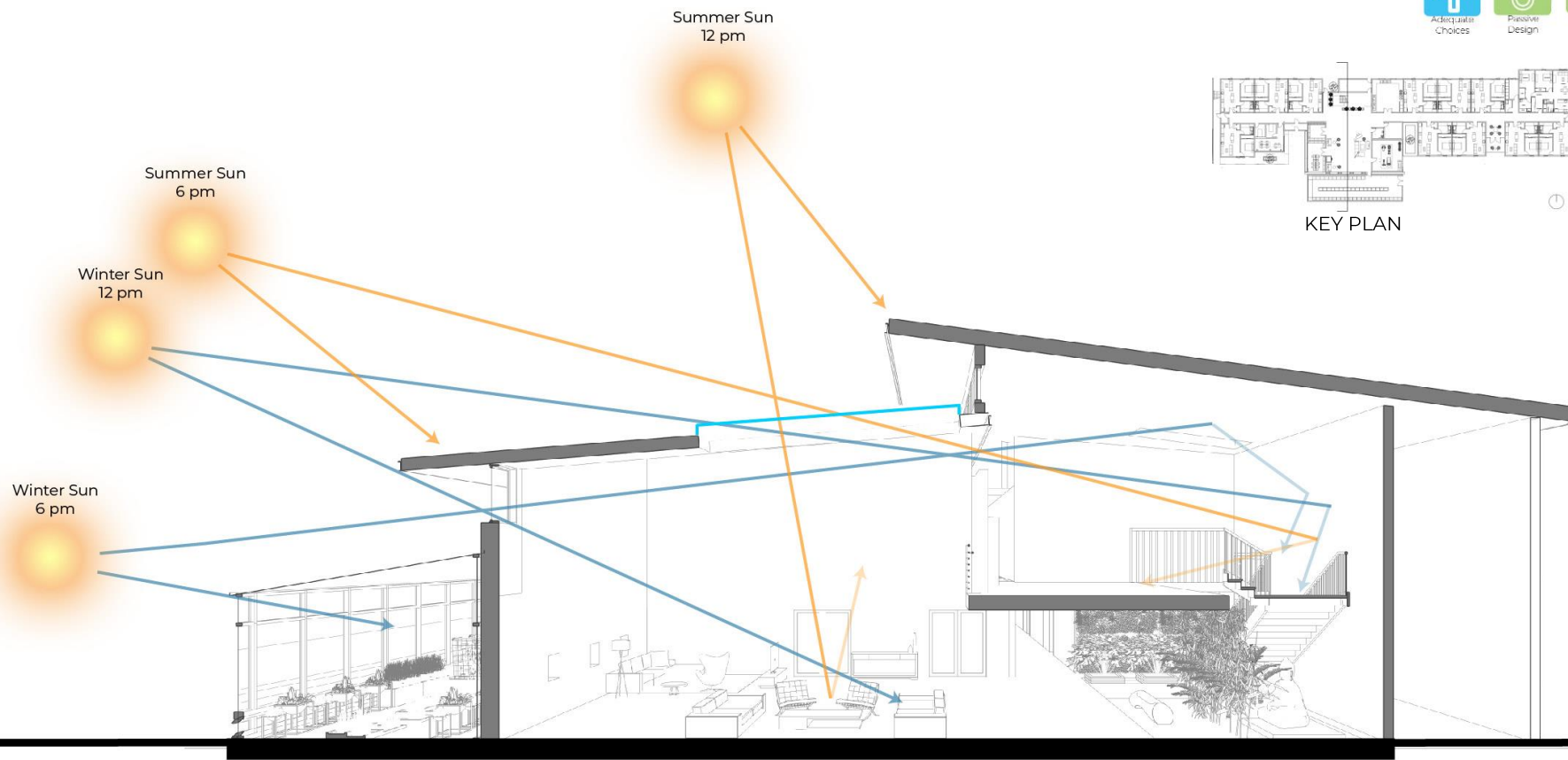
Passive
Design



Lighting
Design



KEY PLAN





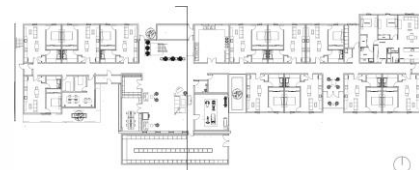
Sensory Room



Greenhouse



Healing Landscape



KEY PLAN



BIOPHILIC DESIGN

ARCHITECTURE



Anxiety



Overstimulation



Difficulty with Changes



CONCRETE



WOOD COMPOSITE
PANEL



CORTEN STEEL



STONE VINEER

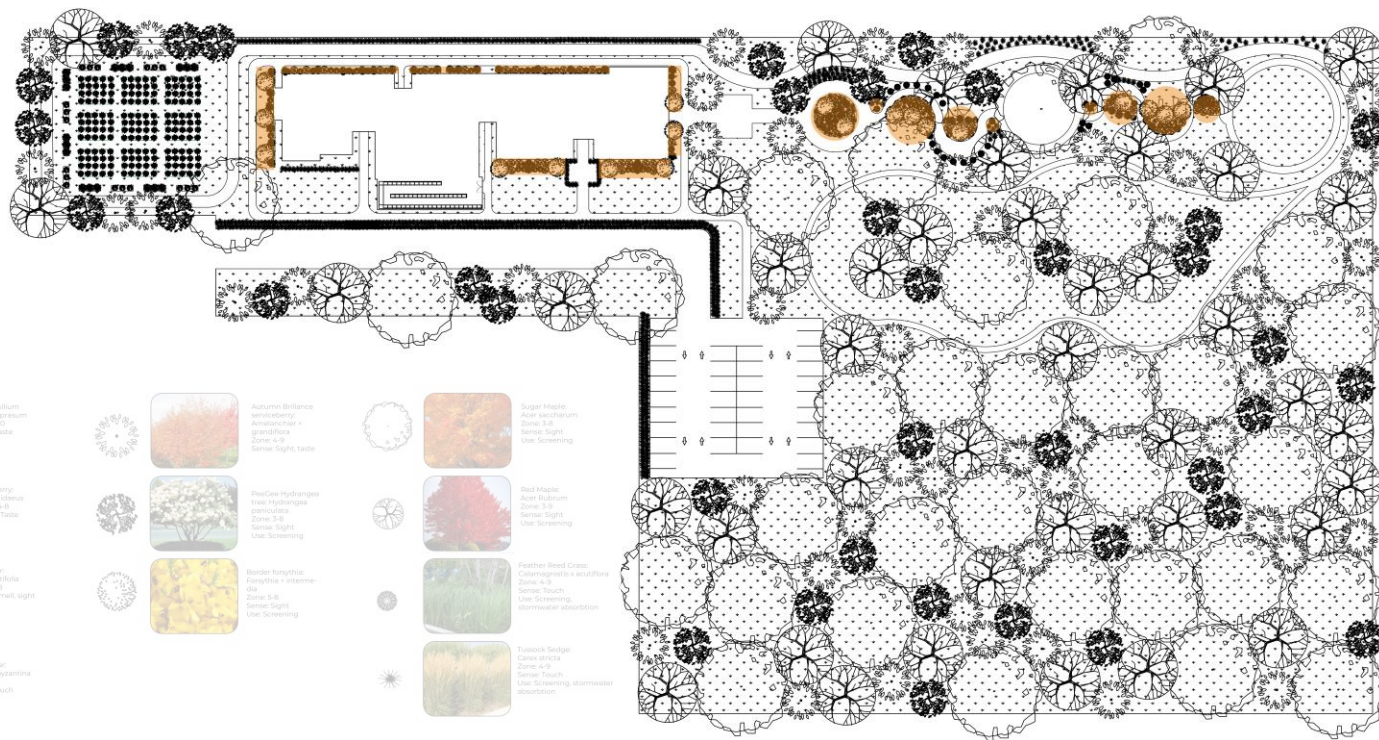


1 Bedroom Unit



2 Bedroom Unit





Planting List 100 Smokey Hollow



Chives Allium
Allium schoenoprasum
Zone 3-5
Senses: Taste



Raspberry
Rubus idaeus
Zone 4-6
Senses: Taste



Lavender
Latifolia
Zone 5-6
Senses: Smell, Sight



Lamb's Ear
Plantaginifolia
Zone 6-7
Senses: Touch



Autumn Brilliance
Amelanchier
grandiflora
Zone 4-6
Senses: Sight, Taste



FireGlo Hydrangea
Hydrangea
paniculata
Zone 5-6
Senses: Sight
Uses: Screening



Border Empress
Camellia
lanceolata
Zone 5-6
Senses: Sight
Uses: Screening



Sugar Maple
Acer saccharum
Zone 5-6
Senses: Sight
Uses: Screening



Red Maple
Acer rubrum
Zone 5-6
Senses: Sight
Uses: Screening



Japanese Reed Grass
Calamagrostis
canadensis
Zone 4-6
Senses: Touch
Uses: Screening, atmospheric absorption



Tursock Sedges
Carex
stricta
Zone 4-6
Senses: Touch
Uses: Screening, atmospheric absorption



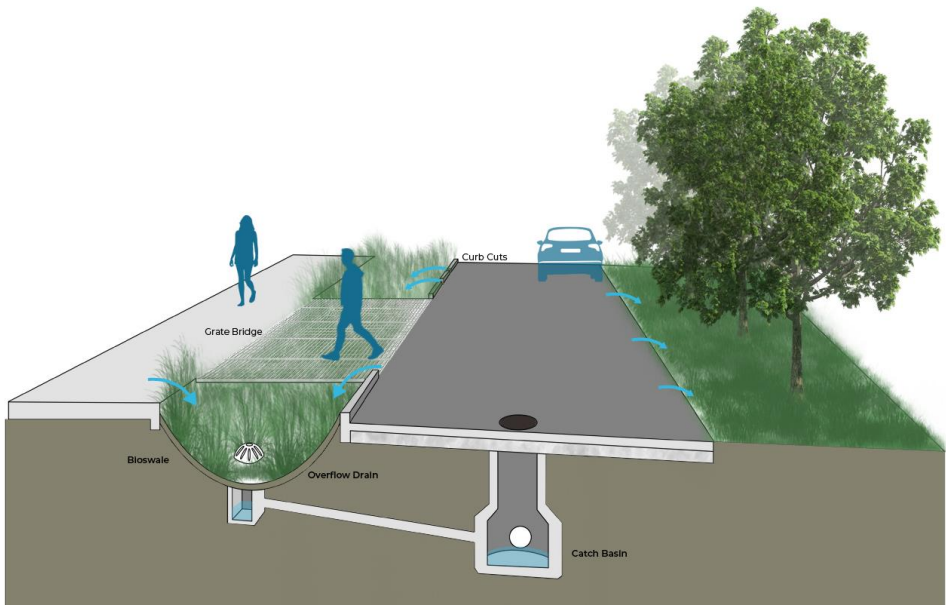
Efficiency



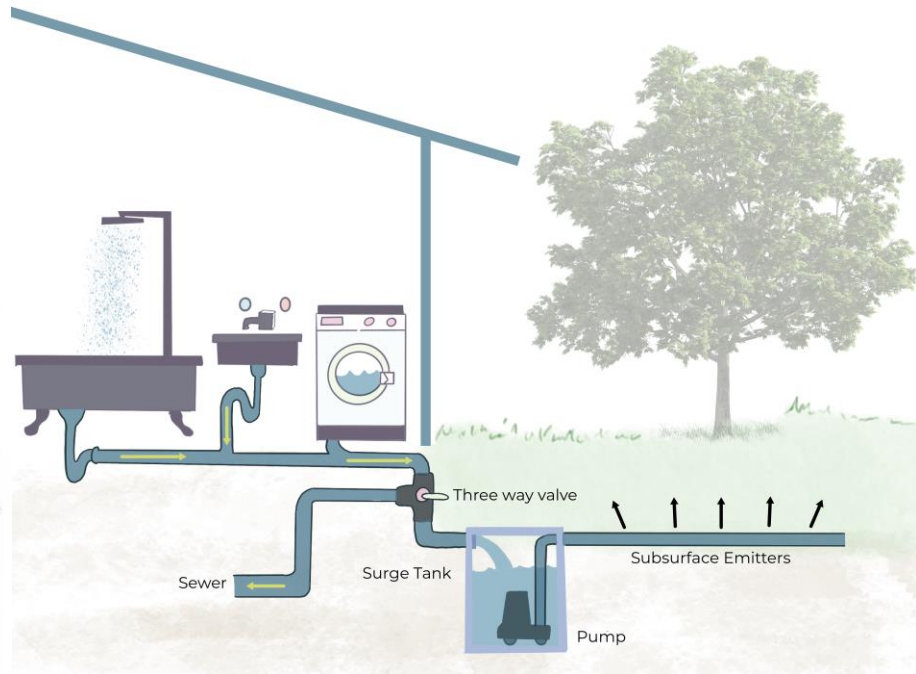
Net Zero



Biophilic Design



STORMWATER SECTION



GREYWATER DIAGRAM

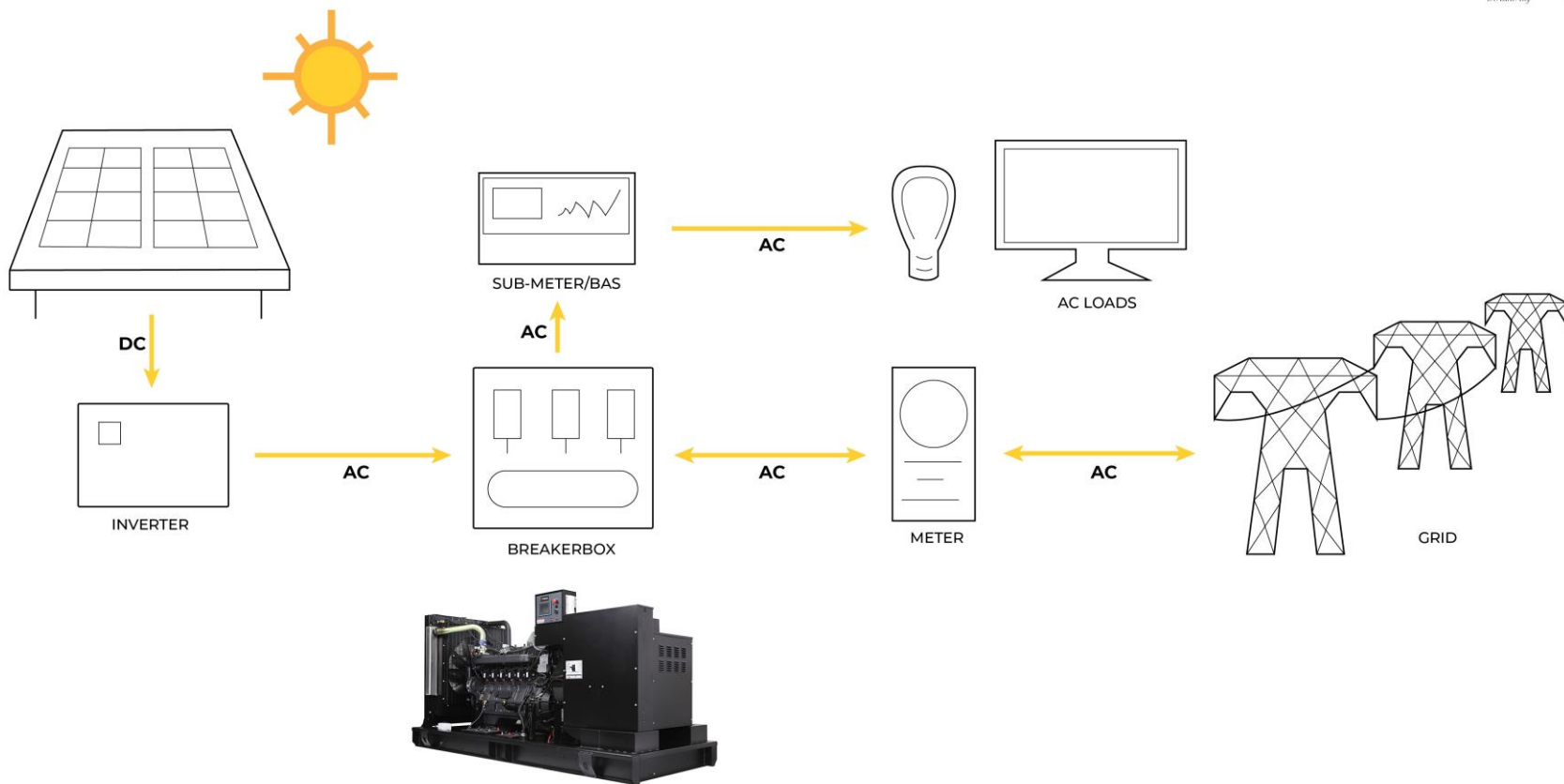
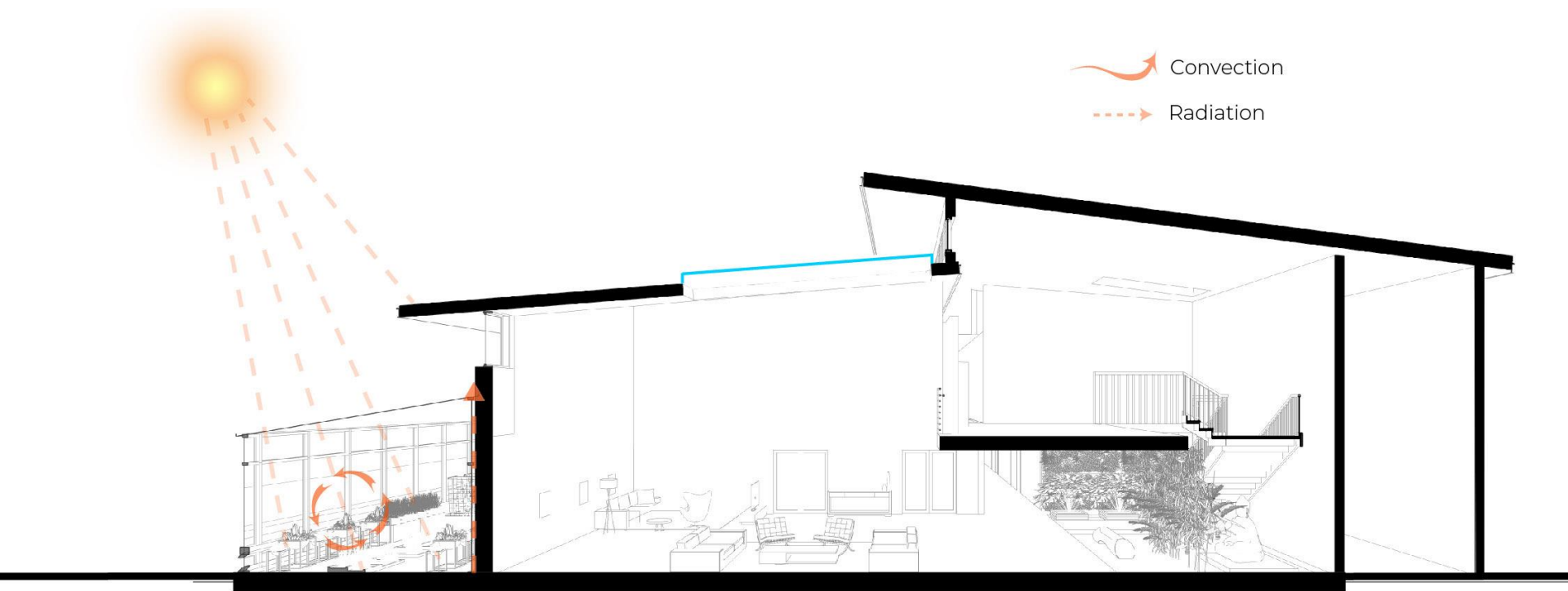
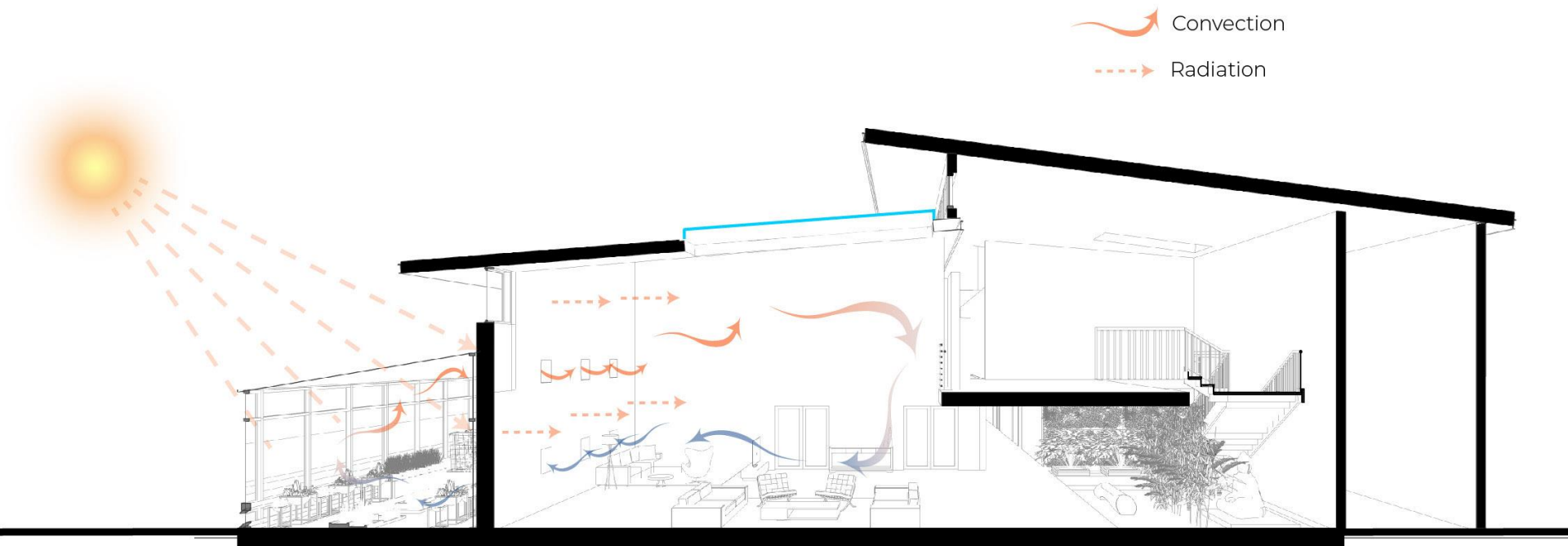


Fig. 2. Generac. n.d.



Convection
Radiation

SECTION THROUGH TROMBE WALL (SUMMERS)



Convection
Radiation

SECTION THROUGH TROMBE WALL (WINTERS)



Durable
Materials



Passive
Design



Minimalistic
Design



Fig. 3. Trane Trace 3D Plus, n.d.

Site Performance

Net Source Energy Use Intensity (EUI)	26.7 kBtu/ft ²
Annual Electrical Consumption	261,931 kWh
Annual Peak Electrical Demand	105 kW

Site Performance

Net Source Energy Use Intensity (EUI)	53.4 kBtu/ft ²
Annual Electrical Consumption	272,458 kWh
Annual Peak Electrical Demand	136 kW

OUR HOME AT SMOKEY HOLLOW WALL
CONSTRUCTION

STANDARD WALL CONSTRUCTION



Fig. 4. Carrier. n.d.

10 ton Carrier VRF

- 2X 10 ton Carrier VRF Outdoor Unit
- IEER 23.20 compared to 20.80 of typical split system



Fig. 5. Carrier. n.d.

Carrier VRF Indoor Unit

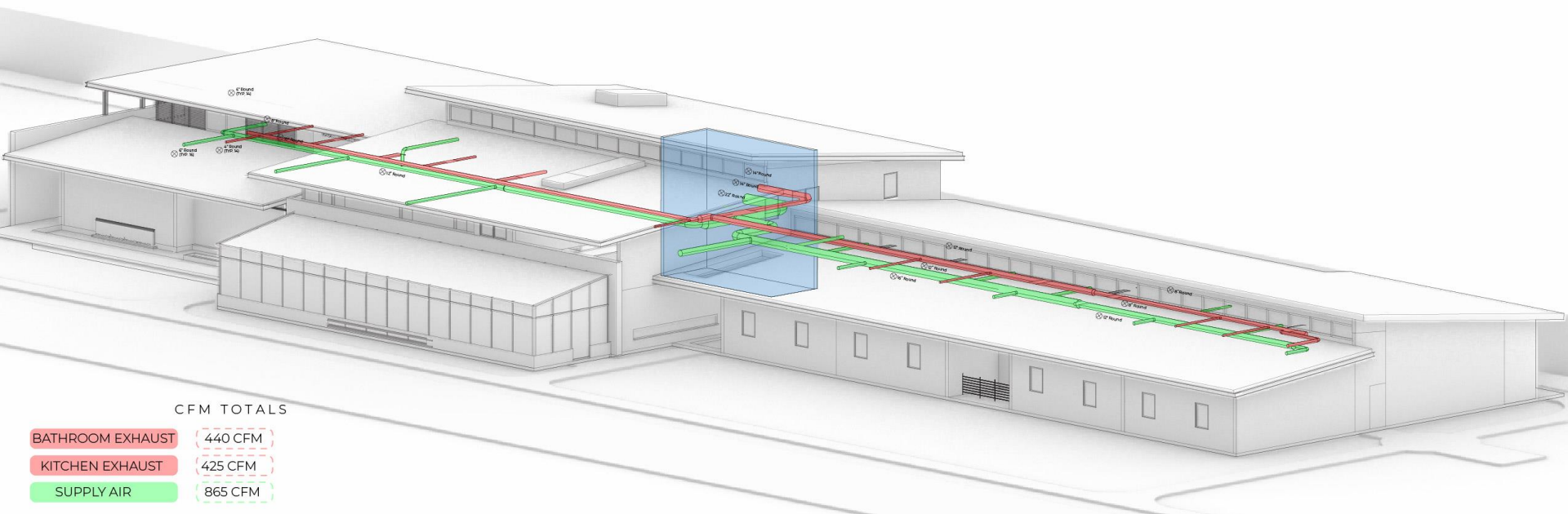
- Sound pressure of 32.8 dBA compared to 40 dBA of ASHRAE Chapter 48 noise allowances



Fig. 6. RenewAire. n.d.

MERV 13 filters

- Only Two penetrations
- Follows ASHRAE 62.2 regardless of building size.
- .6 air changes per hour at 50 pascals





Maggie's cat-
Oreo 45db

Party Wall- STC 63

Hallway Wall- STC 55



FOAM S.T.O.P.[™] Melamine Foam Linear Wedges

- **Class A Fire Retardant**
- **High Performance Absorption**
- **Fiber Free**
- **Anechoic Wedge Design**

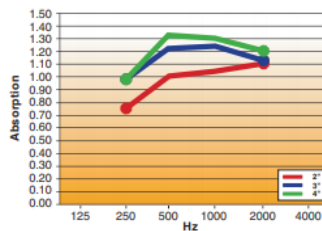


Chart for comparison of Noise Reduction Coefficients (NRC)							
Standard	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz	NRC
2"	.09	.28	.79	.94	1.00	1.04	.75
3"	.10	.48	.91	1.11	1.11	1.14	.90
4"	.16	.56	1.11	1.13	1.13	1.21	1.00

Chart for comparison of Noise Reduction Coefficients (NRC)							
Max Wedge	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz	NRC
6"	.22	1.07	1.27	1.34	1.27	1.15	1.26
8"	.39	1.05	1.44	1.38	1.33	1.19	1.33

Fig. 7 Acoustical Surfaces, Inc. n.d.

Ceilings and Floor- STC 58



Sustainable
Materials



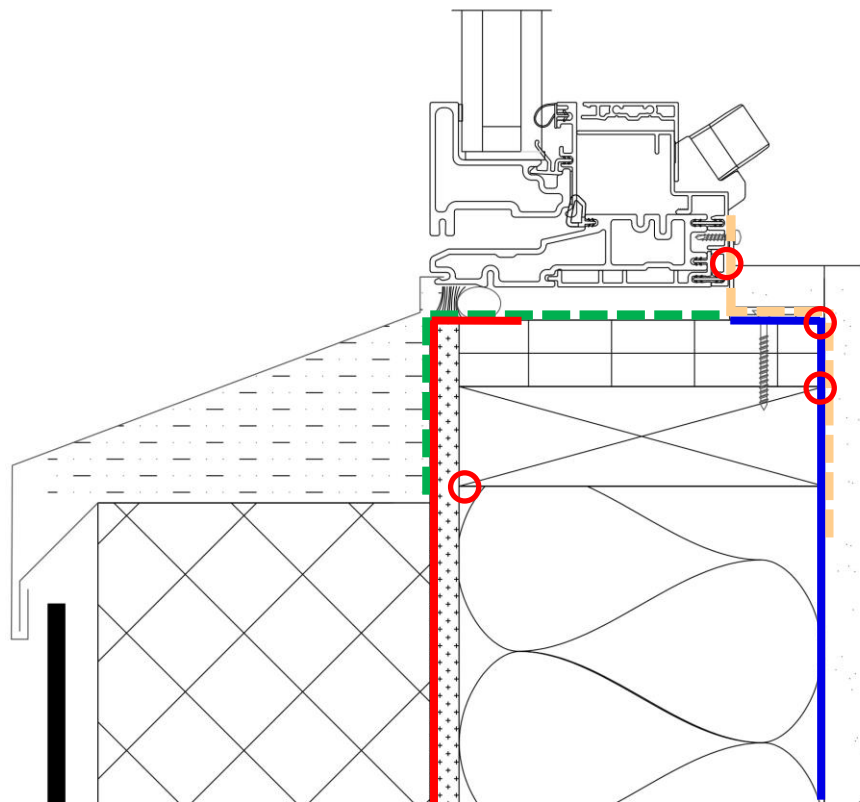
Passive
Design



Minimalistic
Design

Standard Wall

Our Home at Smokey Hollow



Intello smart vapor barrier

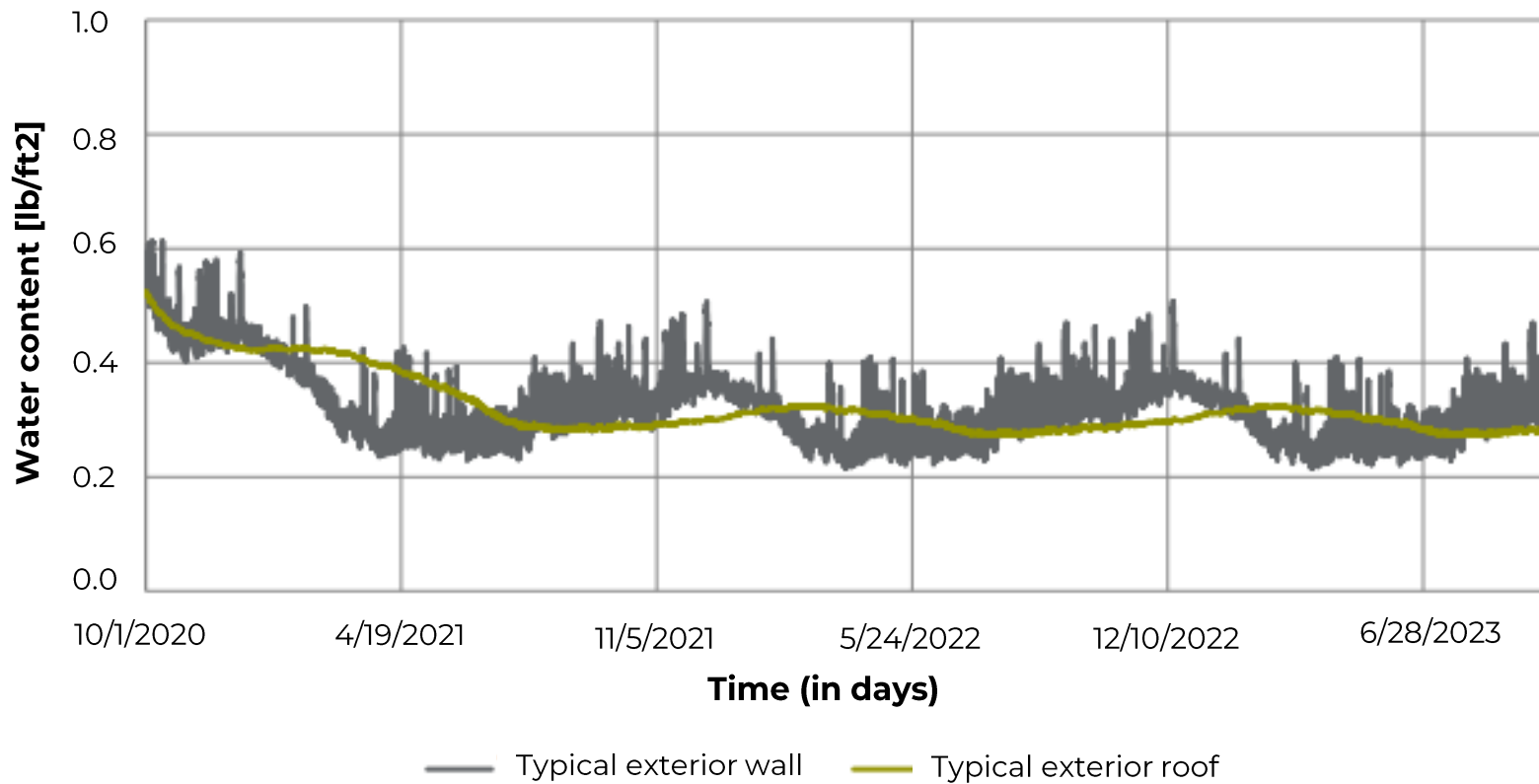
Zip Sheathing

Siga Wigluv

Siga Rissan

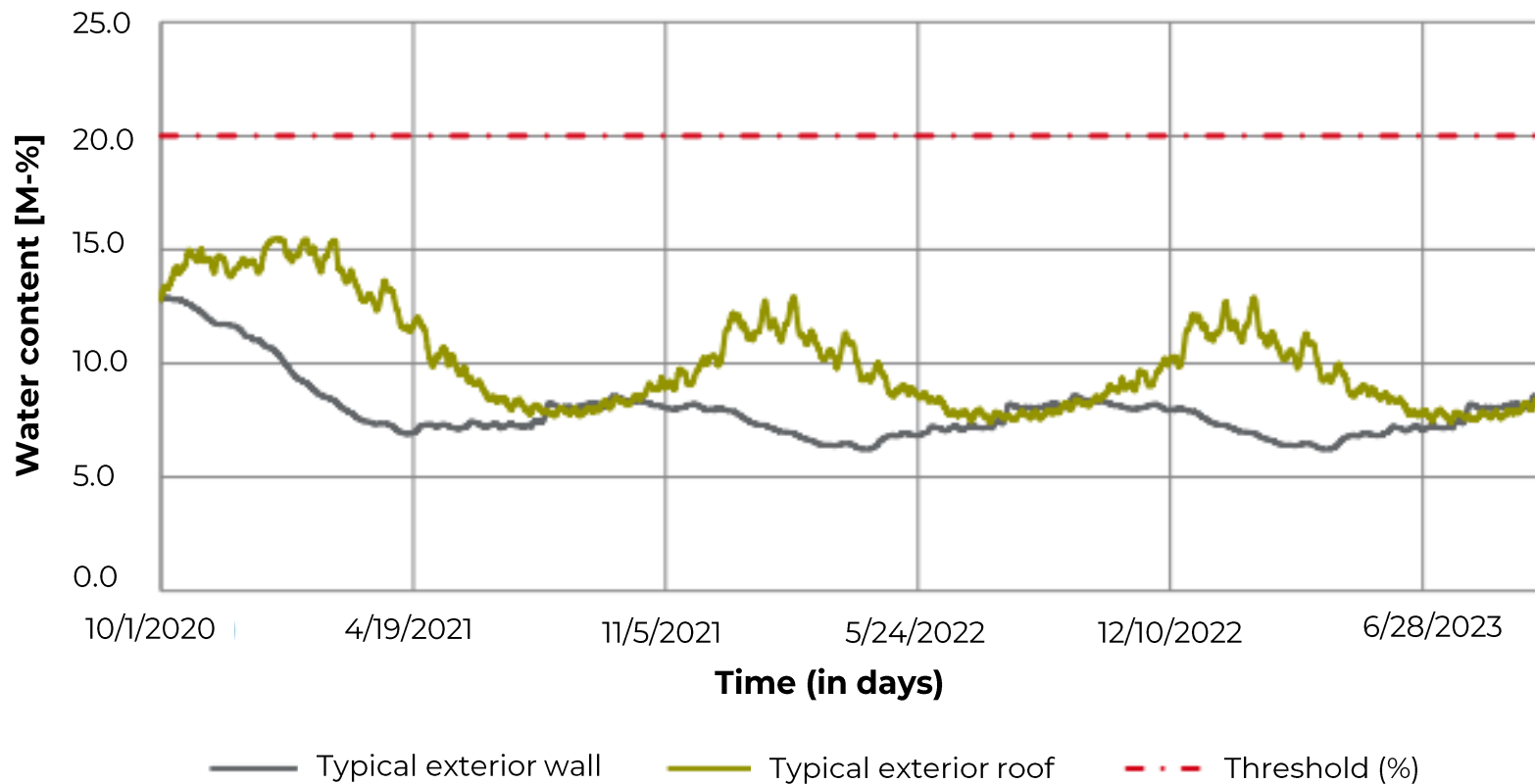


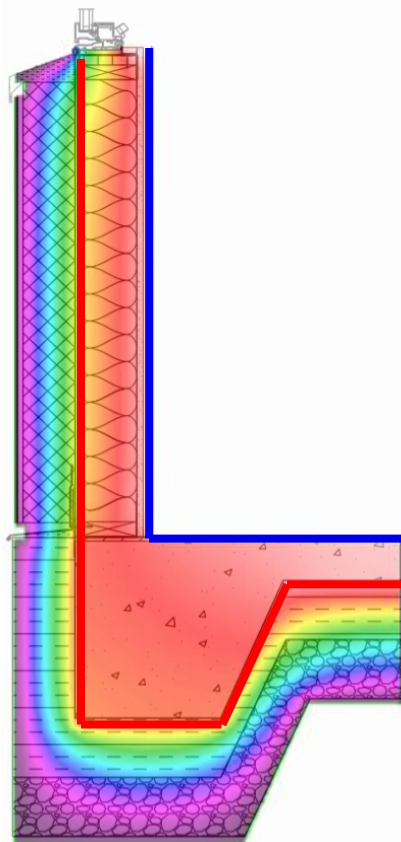
Total Water Content



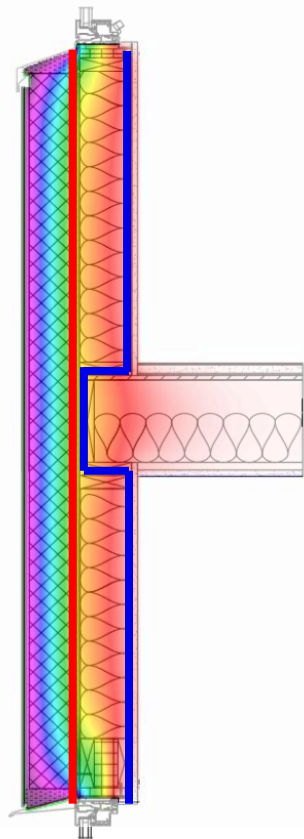


OSB Sheathing Moisture Content





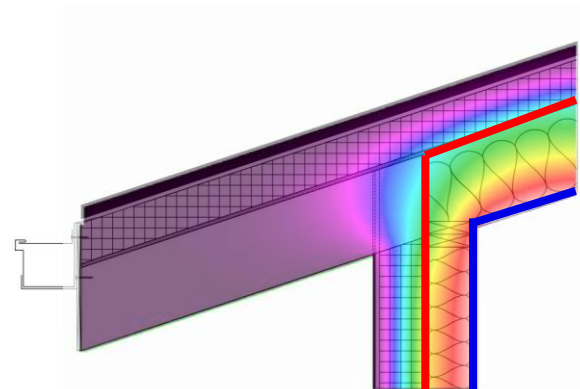
Foundation



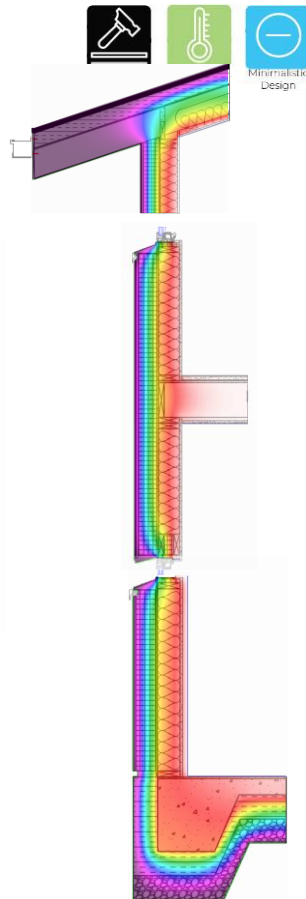
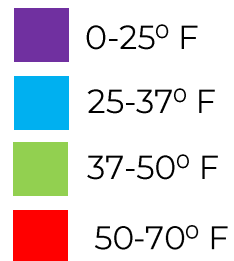
Connection Between Floors

Air barrier

Vapor barrier



Roof Edge





SANCO₂ GEN₃ Specifications

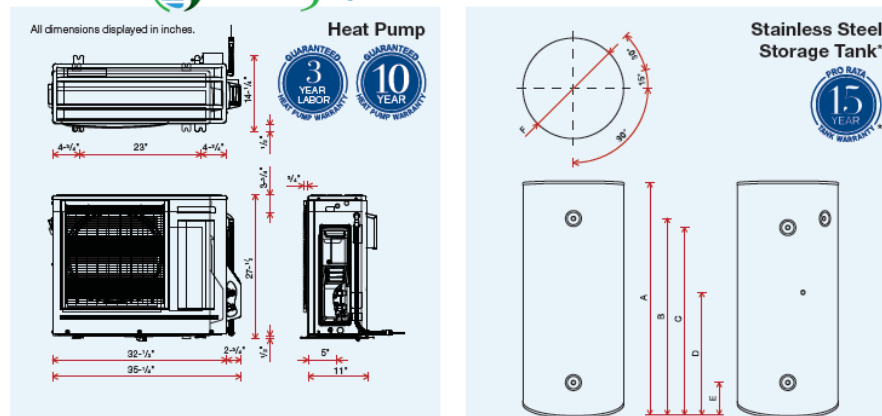


Fig. 8. SANDEN. n.d.

Heat Pump Information		Storage Tank Information	
Uniform energy factor	3.23	Tank capacity	119 Gallons
First hour rating	130 gallons	Warranty	10 Years
Heat pump capacity	15,400 Btu/h		
Heat pump capacity	4.5kW		
Refrigerant type	R744 (CO ₂)		
Outdoor noise level	37dB		



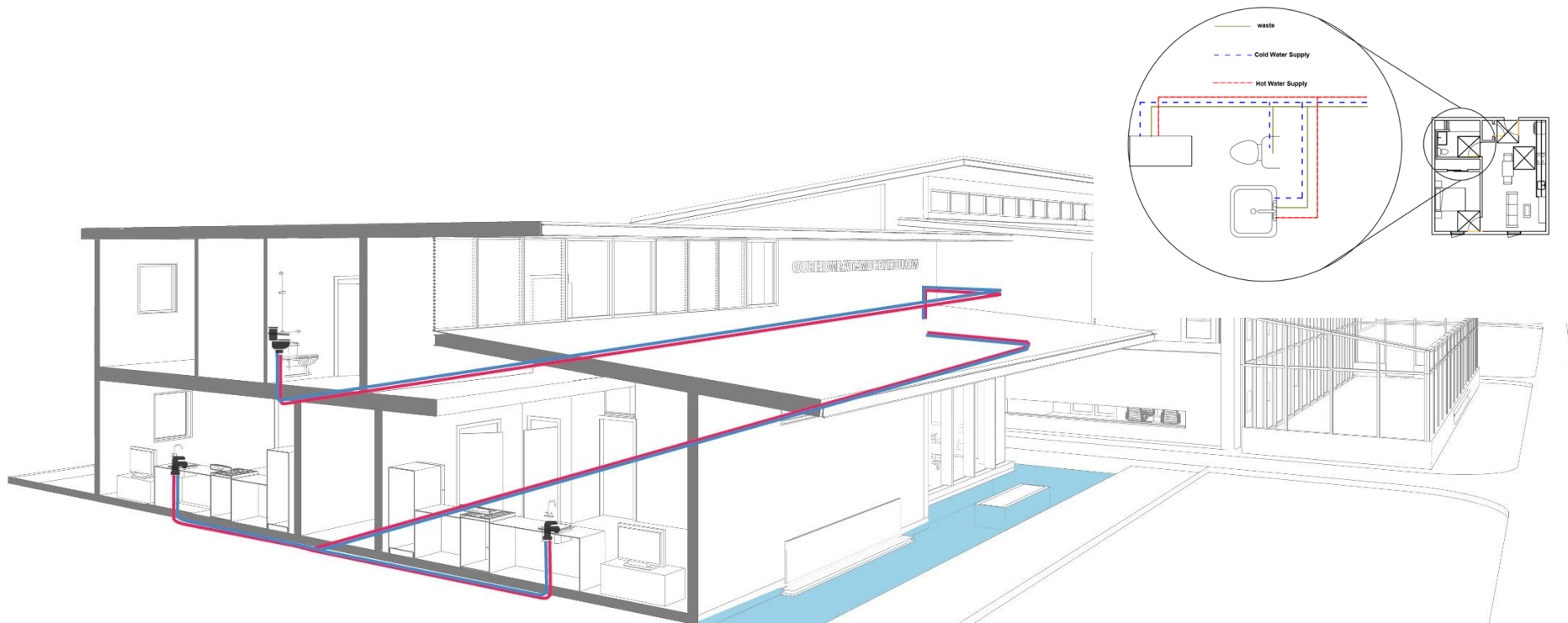
Durable
Materials



Passive
Design



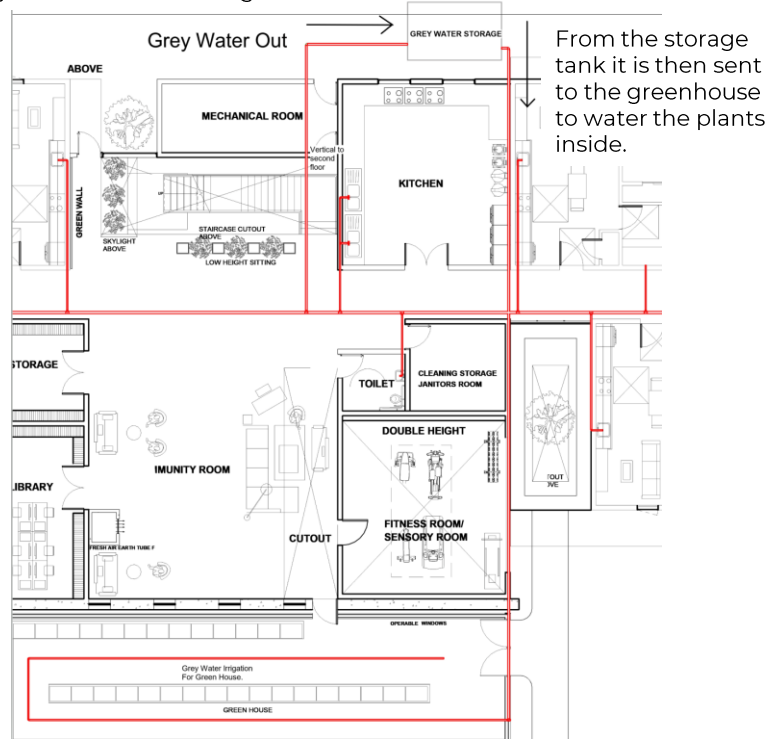
Minimalistic
Design





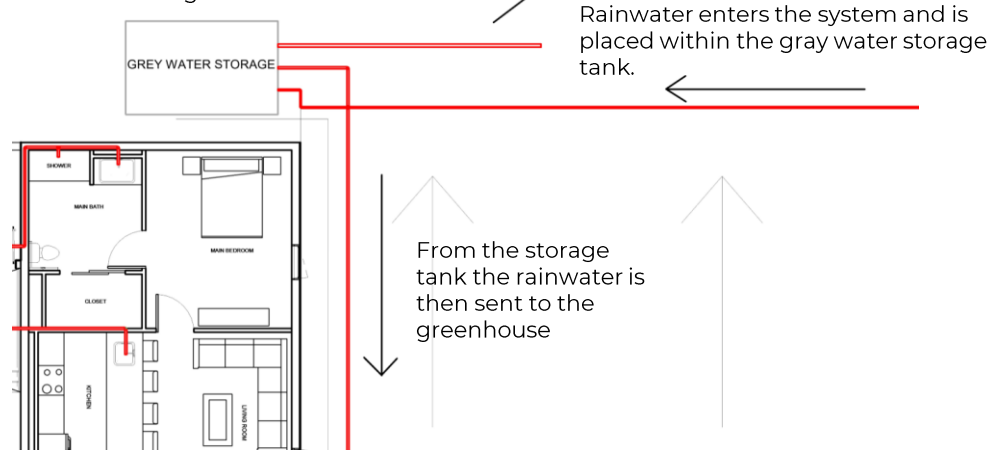
1st floor grey water implementation

Grey water enters the system from the building and is sent to a storage tank.



2nd floor rain water collection

If there is excess rain/grey water left in the system, it may be used onsite for irrigation



Rainwater enters the system and is placed within the gray water storage tank.

From the storage tank the rainwater is then sent to the greenhouse

Water Savings

Water collected from fixtures	110,000 Gallons
Water collected from rainwater	552,000 Gallons
Total	662,000 Gallons



SHOWER

7'-8"

ADA CLEARANCE

5'-9"

MODULAR TOILET DESIGN



Fig. 9. Niagara. n.d.

THE ORIGINAL™
0.8 GPF SINGLE FLUSH TOILET
Elongated Bowl with 12" Rough-In

HEALTHGUARD™
HANDHELD SHOWERHEAD



Fig. 10. Niagara. n.d.

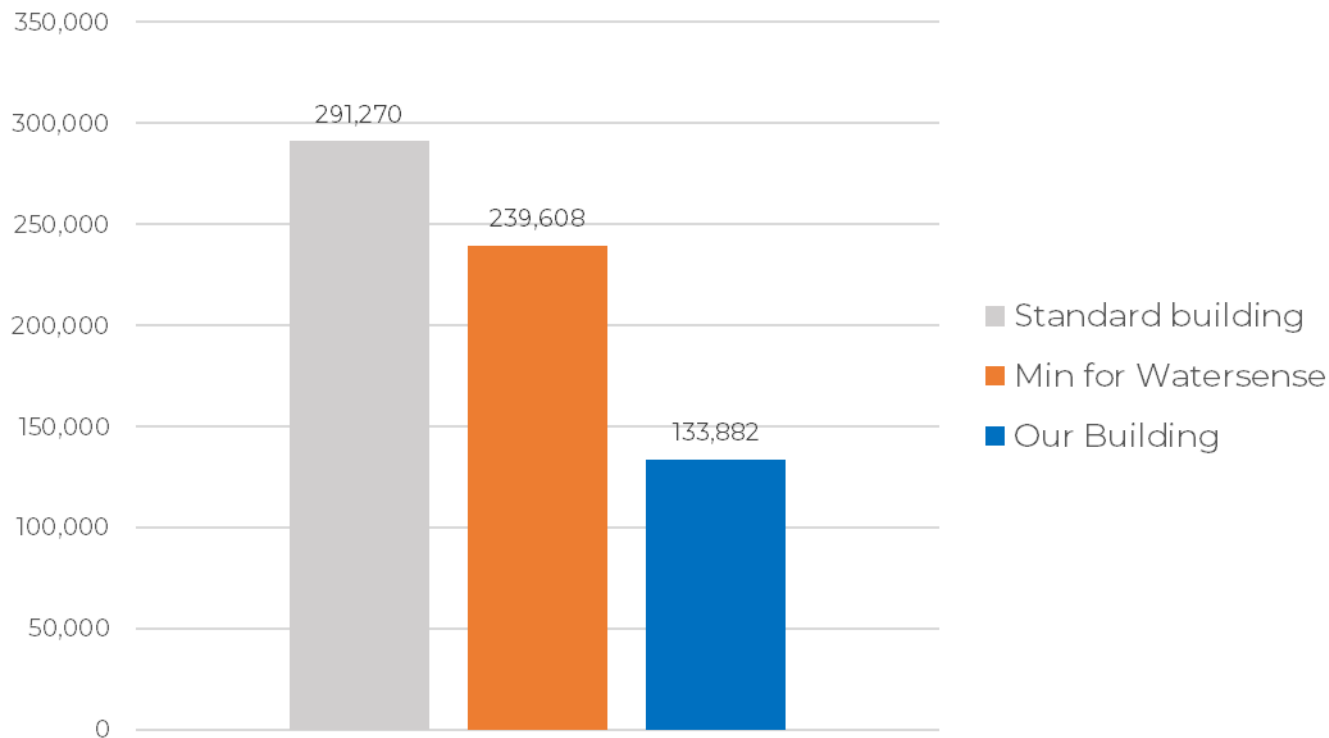
TRI-MAX™
FIXED MOUNT AERATOR



Fig. 11. Niagara. n.d.



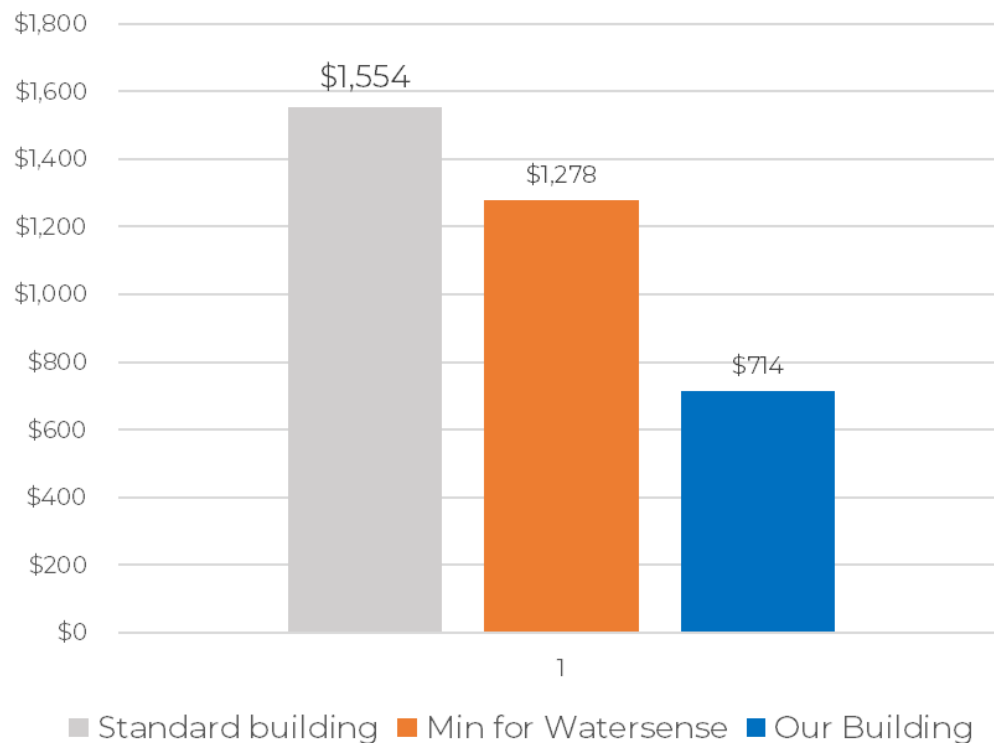
Gallons per year



Saves 45% off EPA's water sense standard.



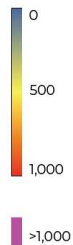
Cost per Year



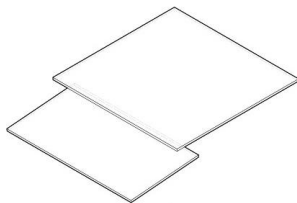
New York State cost of water
\$3.99/100ft³



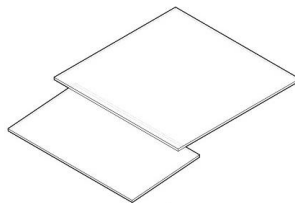
Illuminance (lux)



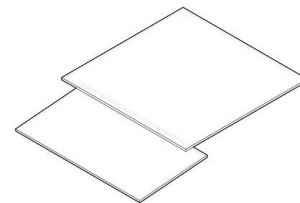
9 am



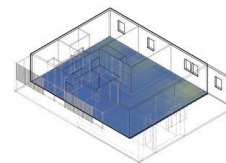
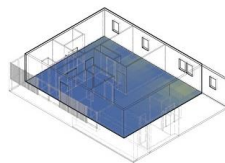
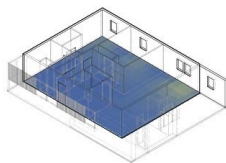
12 pm



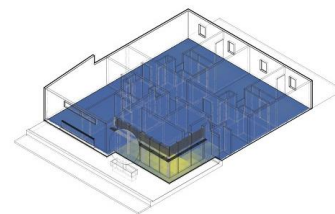
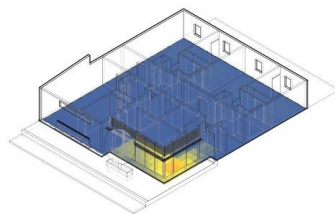
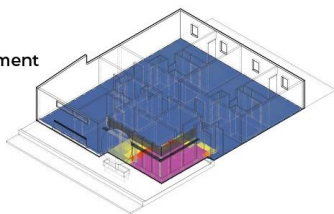
3 pm



2 Bedroom Apartment

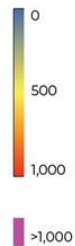


Offices +
1 Bedroom Apartment

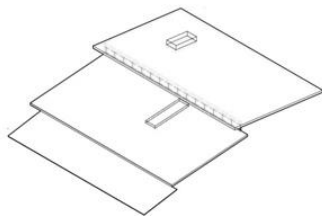




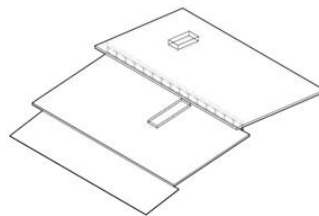
Illuminance (lux)



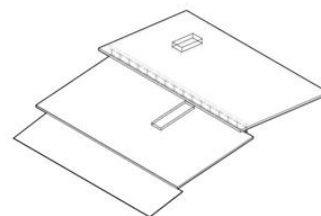
9 am



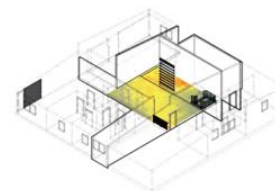
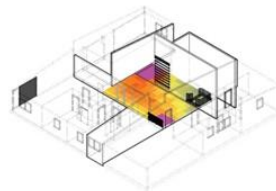
12 pm



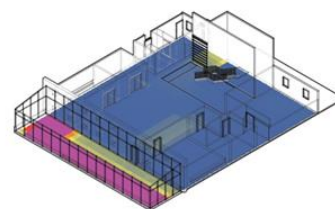
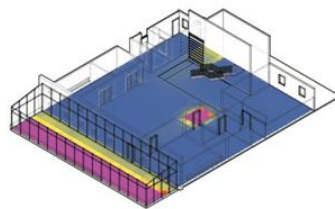
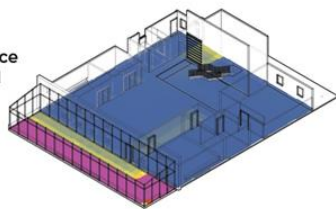
3 pm



Common Space
Upper Level

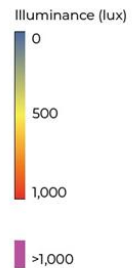


Common Space
Lower Level



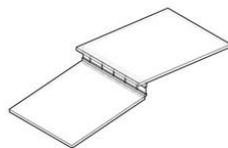
DAYLIGHTING ANALYSIS

ENERGY

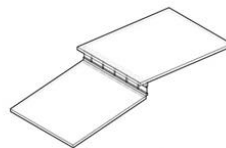


1 Bedroom Apartment

9 am



12 pm



3 pm

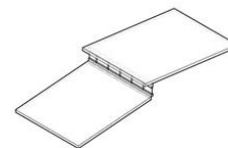




Fig. 12. Brilli. n.d.



Fig. 13. Brilli. n.d.

❖ Optimal Circadian Stimulus

❖ Ultra-Low Flicker

❖ ENERGYSTAR Certified

❖ WELL Certified



Fig. 14. Energy Star. n.d.



Fig. 15. WELL Building Institute. n.d.



5000K

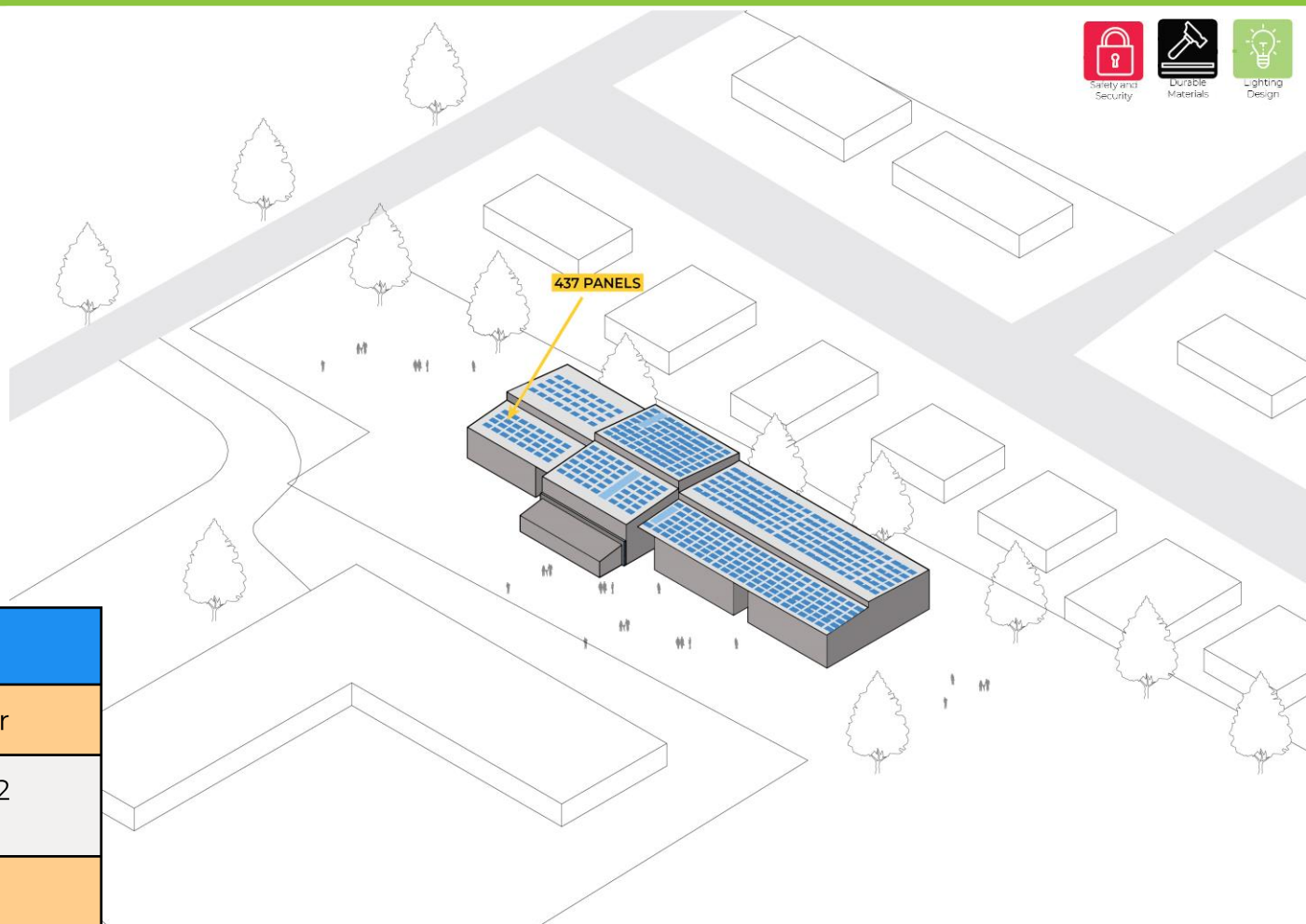
2200K

Fig. 16. Corgan. n.d.



LIGHTING

ENERGY



Roof-top Array Specifications	
Production	214,710 kWh/Year
Panel	Prism Solar BN72 Bifacial
Efficiency	21.2%

SOLAR PV

ENERGY

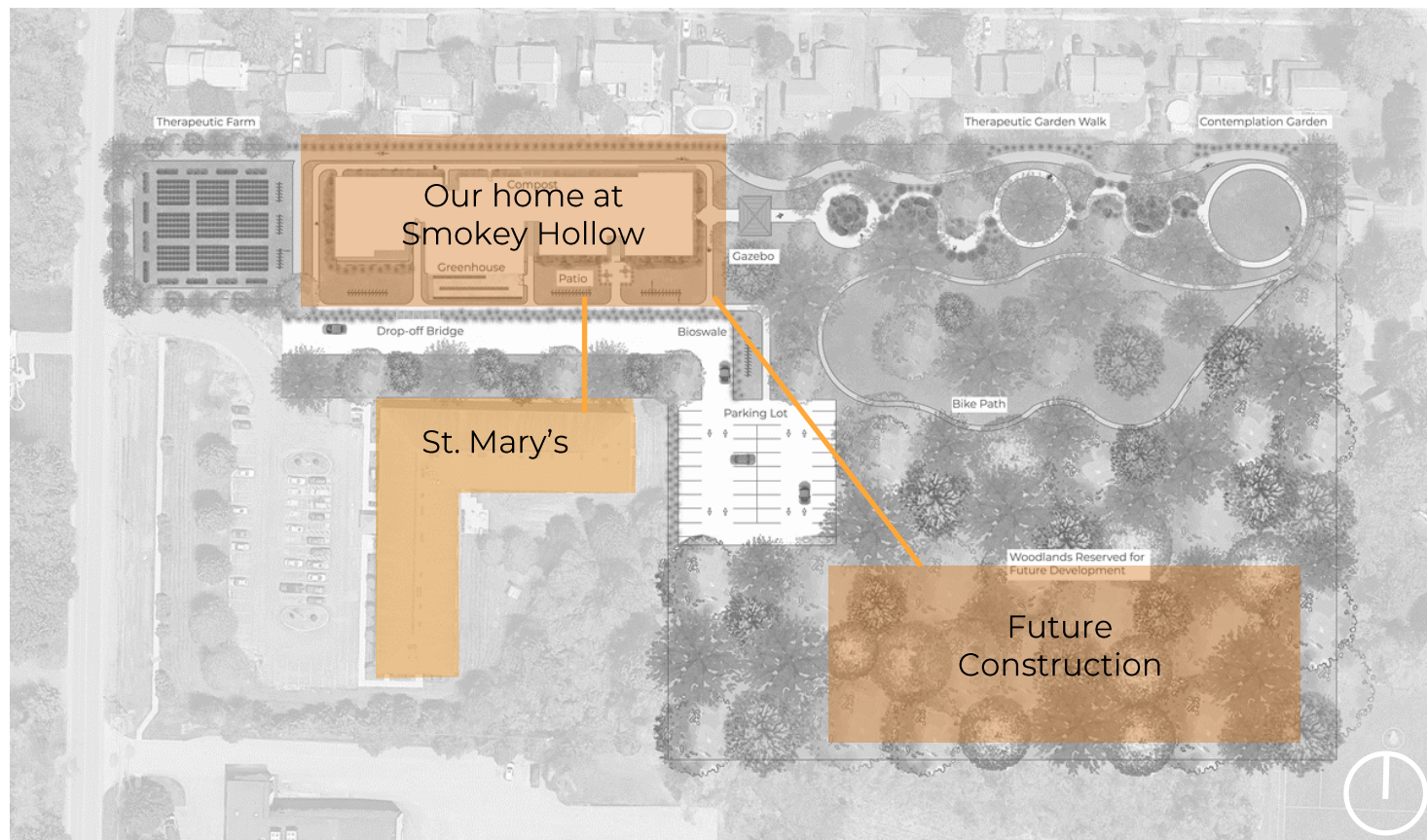


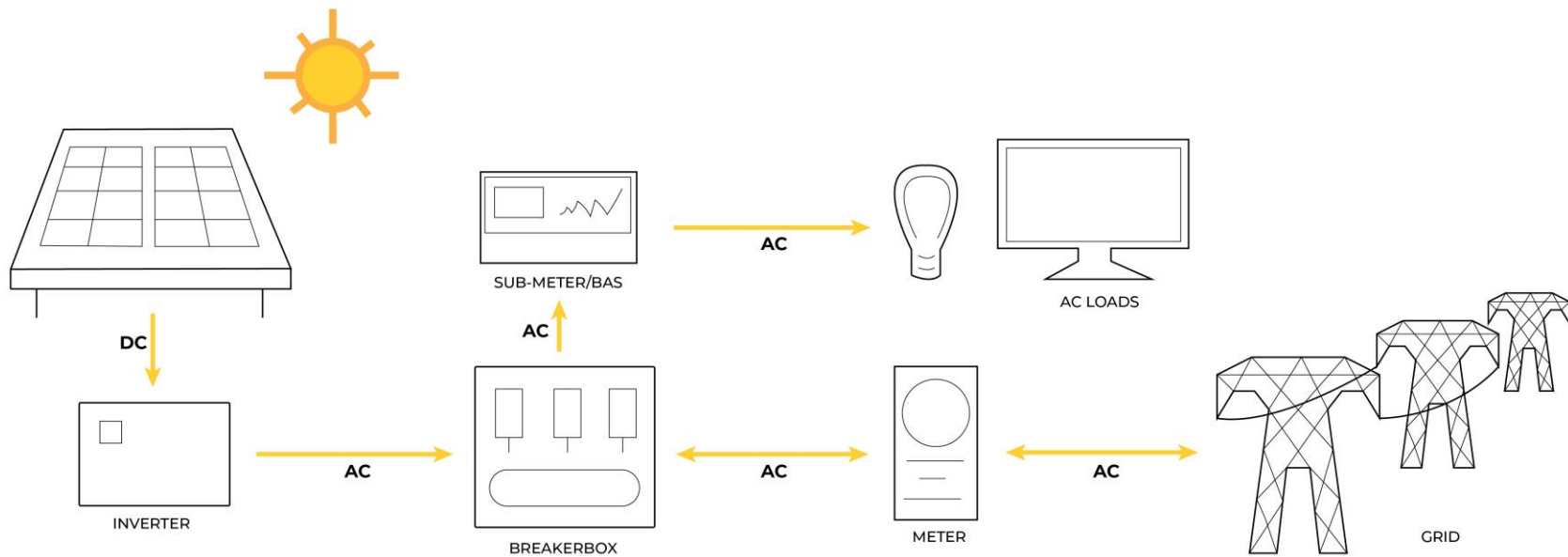
Fig. 17. Prism Solar. n.d.

72-Cell Bifacial Series 370W



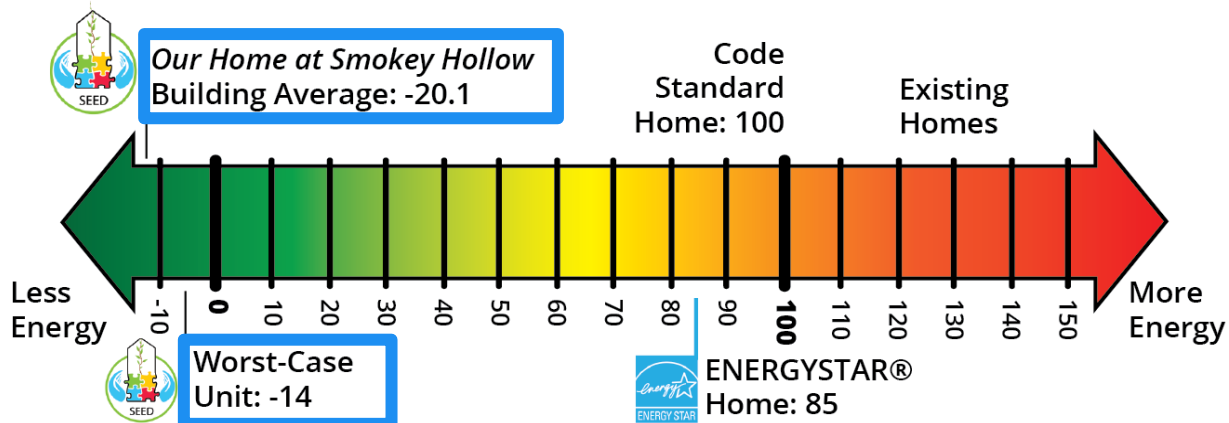
Fig. 18. Prism Solar. n.d.







HERS® Index





Unit Type	Number of units	HERS Index Without PV	HERS Index With PV	Heating Load MMBtu/yr	Cooling Load MMBtu/Yr	Annual Utility Without PV	Annual Utility With PV
1 Bedroom Middle	8	39	-16	5.5	0.2	\$566.00	\$0.00
1 Bedroom Corner	3	37	-14	6.0	0.2	\$578.00	\$0.00
2 Bedroom Middle	1	41	-34	6.5	0.3	\$803.00	\$0.00
2 Bedroom Corner	3	39	-31	7.1	0.3	\$819.00	\$0.00
2 Bedroom Long	1	38	-24	6.9	0.3	\$766.00	\$0.00
Average		38.69	-20.06	6.4	0.3	\$706.40	\$0.00



Honeywell Building Integration

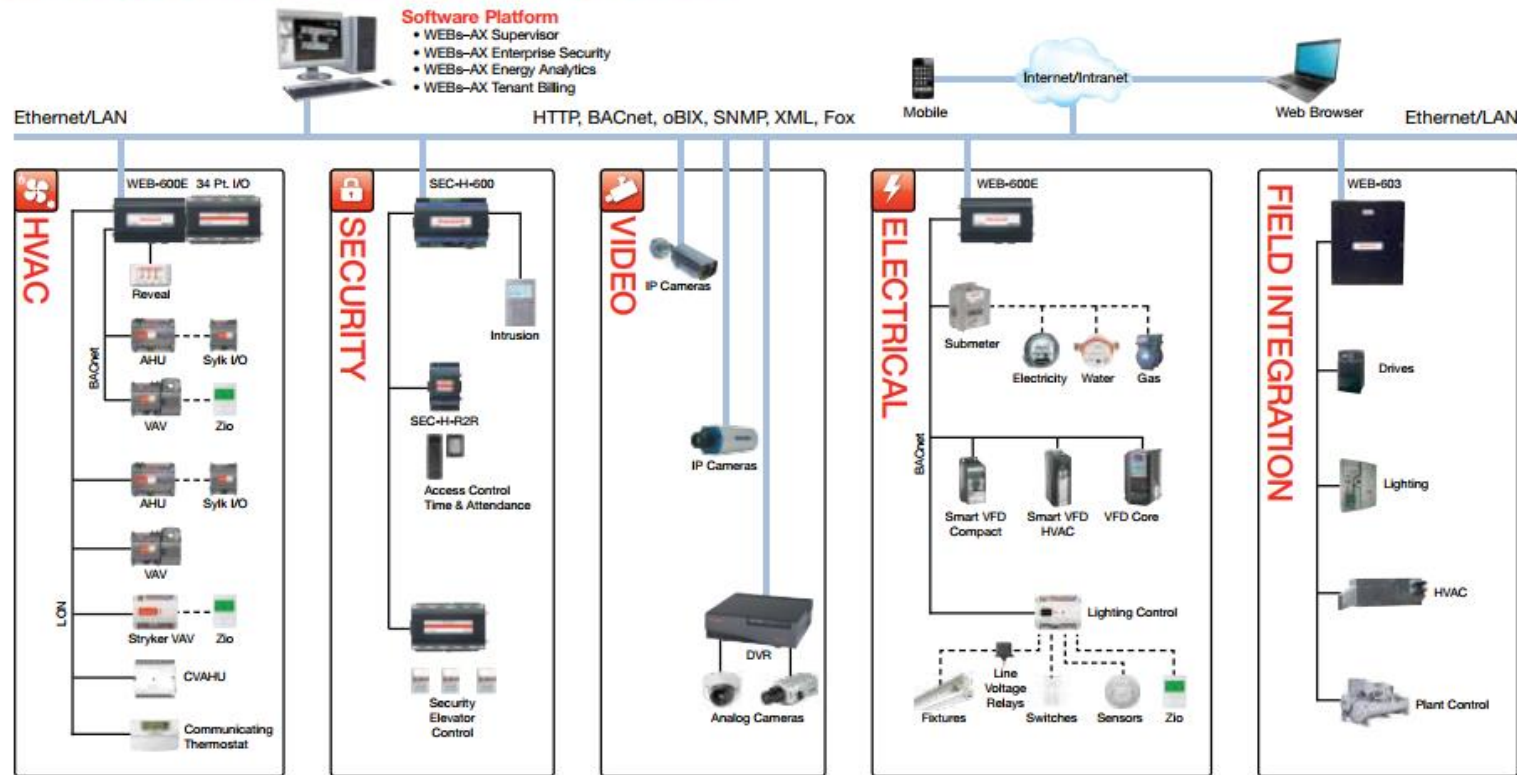
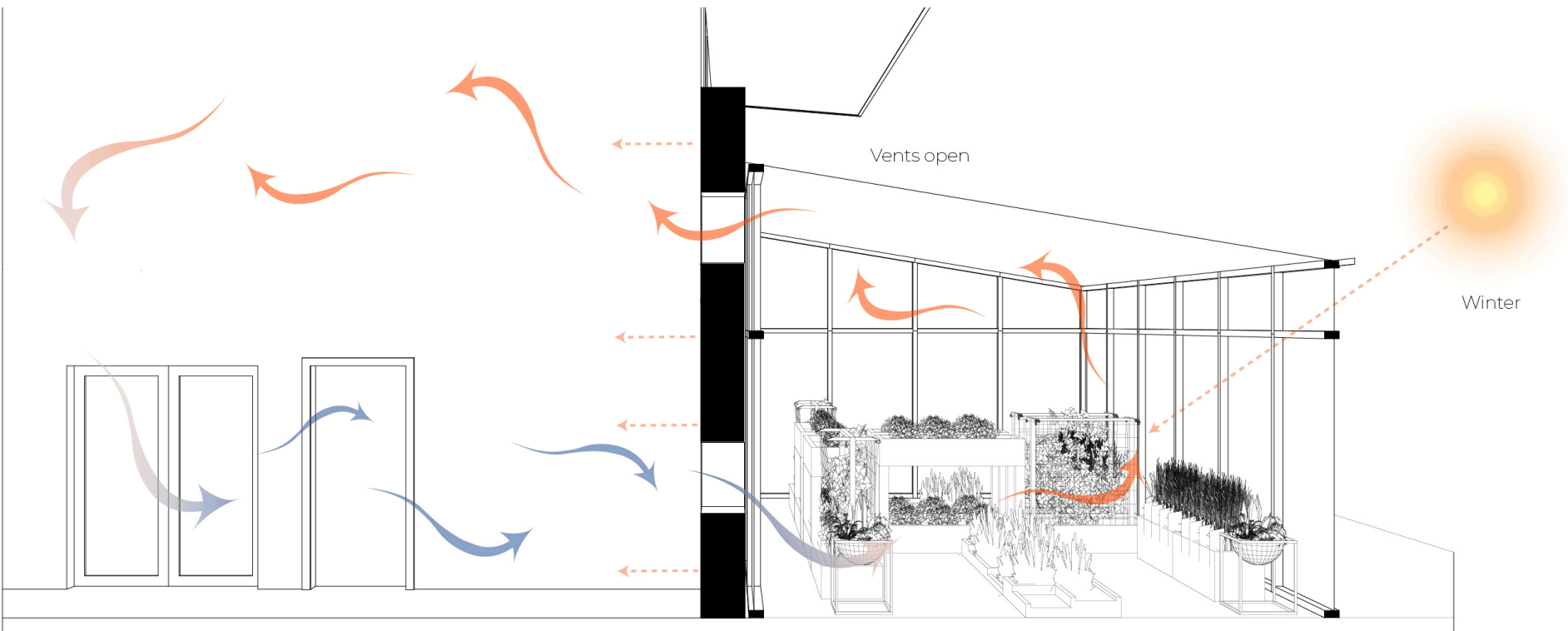


Fig. 19. Honeywell. n.d.





Technology	Model	Specific Use
Building Automation System	WEB's-AX system	Allows all systems in our building to be connected and work in unison to achieve the ideal environment for our residents.
Lighting System	Brilli	Self-adjusting lighting system that changes based on external factors and preset contingencies through the BAS.
Life Safety Alert System	Kidde Smoke Detector with Voice Alarm	Life alert system that utilizes less sound and flashing lights to mitigate unnecessary panic caused by ADS.



Kidde Voice Alert Smoke and CO Alarm



Fig. 20. Home Depot. n.d.

Bed Shaker Alarm



Fig. 21. Harris Communications. n.d.



Efficiency



Minimalistic
Design



A3A+T
Layout

Lux Kono Smart thermostat



Fig. 22. LUX. n.d.

Insignia Bottom- Freezer Refrigerator



Fig. 23. Best Buy. n.d.

Samsung Clothes Washer



Fig. 24. Energy Star. n.d.



Durability

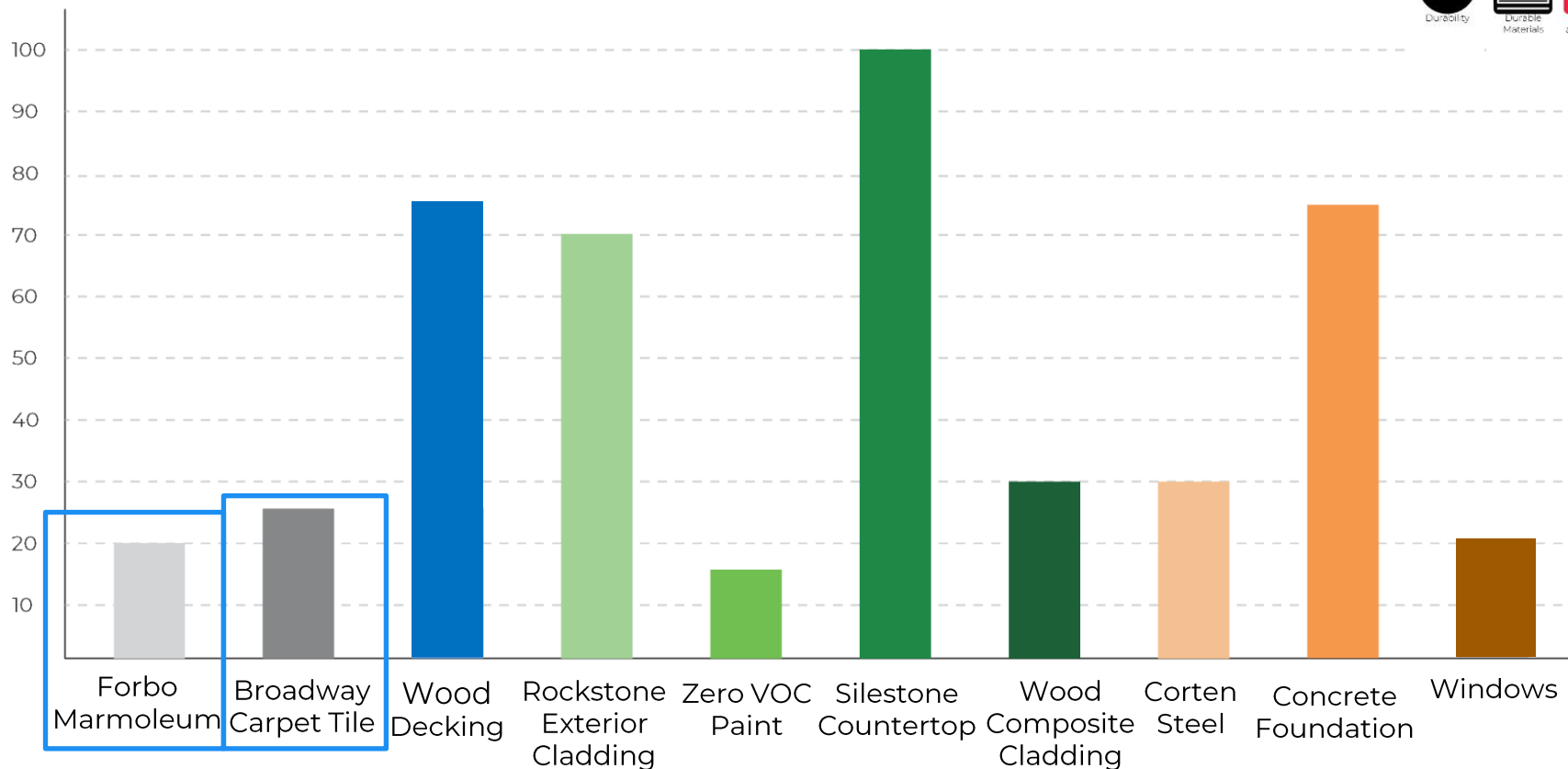


Durable Materials



Family and Stability

Years



DURABILITY OF MATERIALS

OPERATION

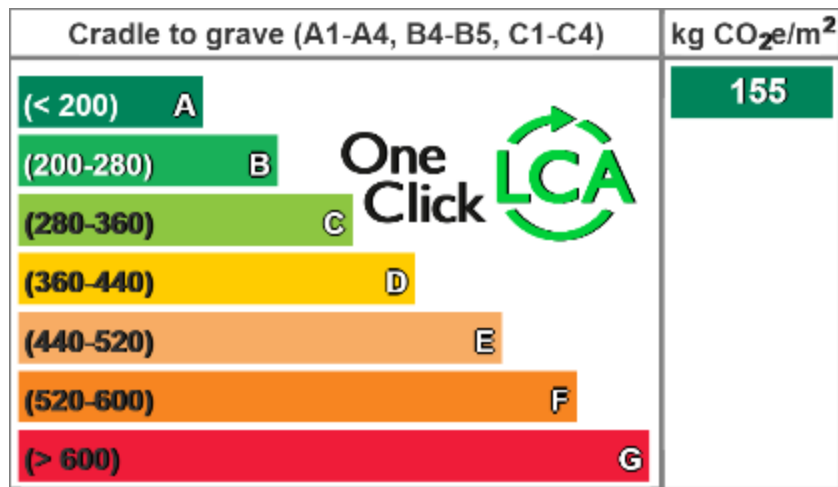
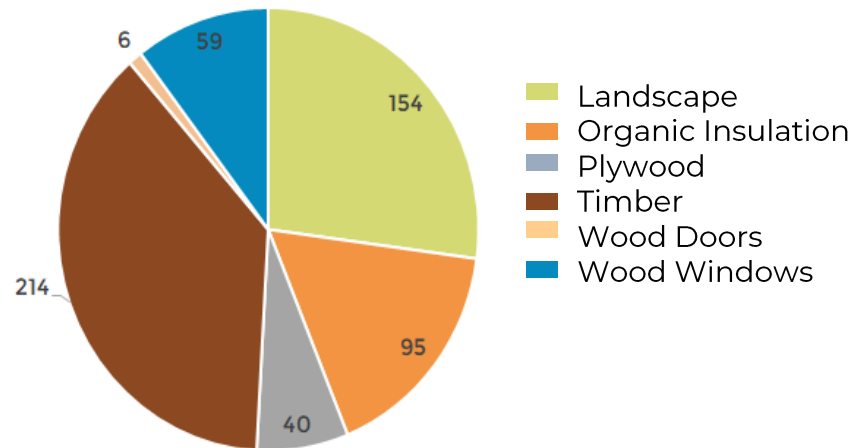


Fig. 25. One-Click LCA. n.d.

Embodied Carbon:

- 410 tons

Sequestered Carbon (tons)



Sequestered Carbon:

- 509 tons sequestered
- Net **-99 tons of CO₂e**



Efficiency



Durable
Materials



Net Zero



NEW YORK
STATE OF
OPPORTUNITY™

NYSERDA

Fig. 26. NYSERDA. n.d.

Total Incentives	
Low-Rise Residential New Construction Program	\$62,400.00
NY- Sun Megawatt Block	\$63,854
Buildings of Excellence Competition	\$458,250
Total incentives	\$584,504



Minimalistic
Design



Durable
Materials



Passive
Design



Fig. 27. Autodesk. n.d.

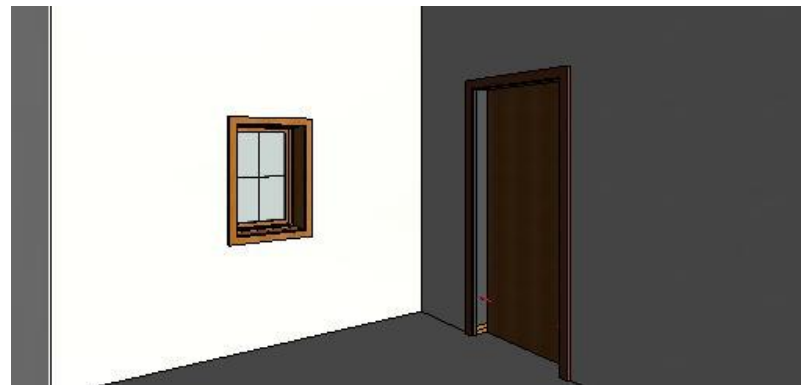


Fig. 28. AGACAD. n.d.

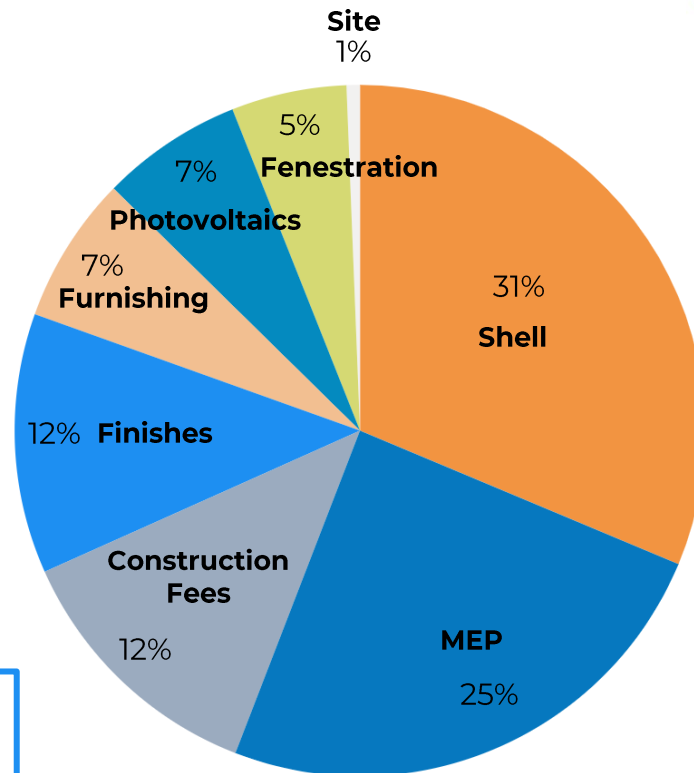




Cost Analysis

- Shell- \$1,940,459
- MEP- \$1,521,935
- Construction Fees- \$770,537
- Finishes- \$753,447
- Furnishings- \$426,889
- Photovoltaics- \$410,490
- Fenestration- \$334,275
- Site- \$38,810

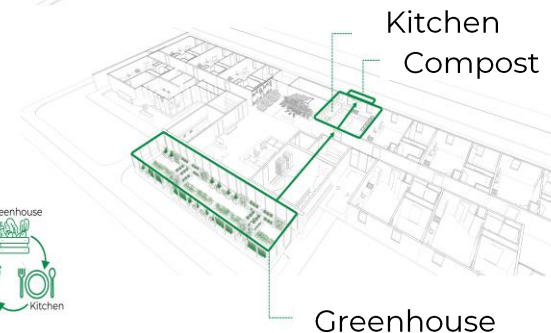
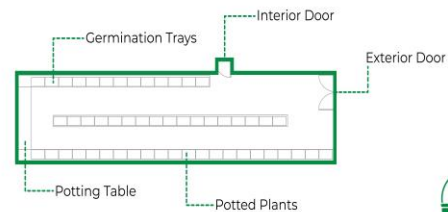
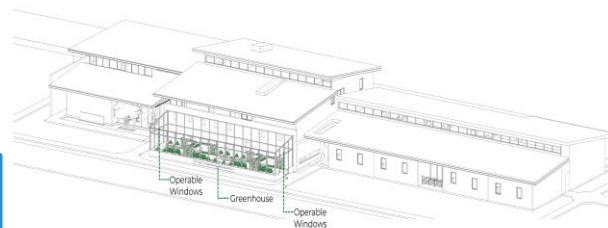
- Estimated Construction Cost: **\$6,196,852**
- About **\$270/sq. ft.**
- Actual Cost: **\$5.9-\$6.8 Million**





Greenhouse Payback:

Greenhouse Size:	1,350	Sq. ft
Greenhouse Cost:	\$54,937	
Harvest Value:	\$8,798	
Harvest Frequency:	3	per year
Annual Value:	\$26,394	per year
Payback:	2.1	years





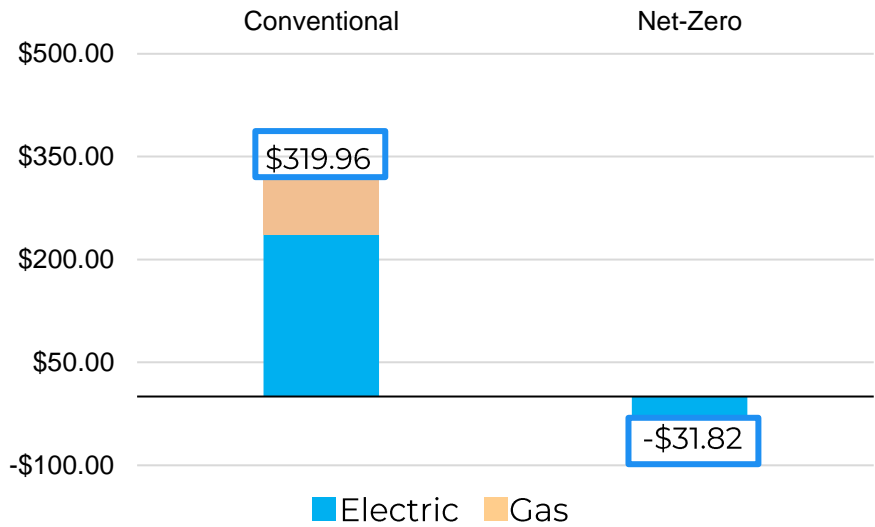
Efficiency

Durable
Materials

Net Zero

Solar Payback:			
Electricity Value:	\$0.18	per kWh	
System Size:	182.44	kW	
System Net Cost:	\$346,636		
Annual Energy:	\$214,710	kWh/year	(Average)
Annual Energy:	205,928	kWh/year	(Low)
Annual Energy:	217,458	kWh/year	(High)
Yearly Value:	\$38,709	per year	(Average)
Payback:	9.0	years	

Annual Energy Cost

**\$7345 Annual Savings**



	Conventional Building	Our Home at Smokey Hollow
Construction Costs	\$5,040,640 (\$220/sq. Ft.)	\$6,196,852 (\$270/sq. Ft.)
Payback Period	17 years	

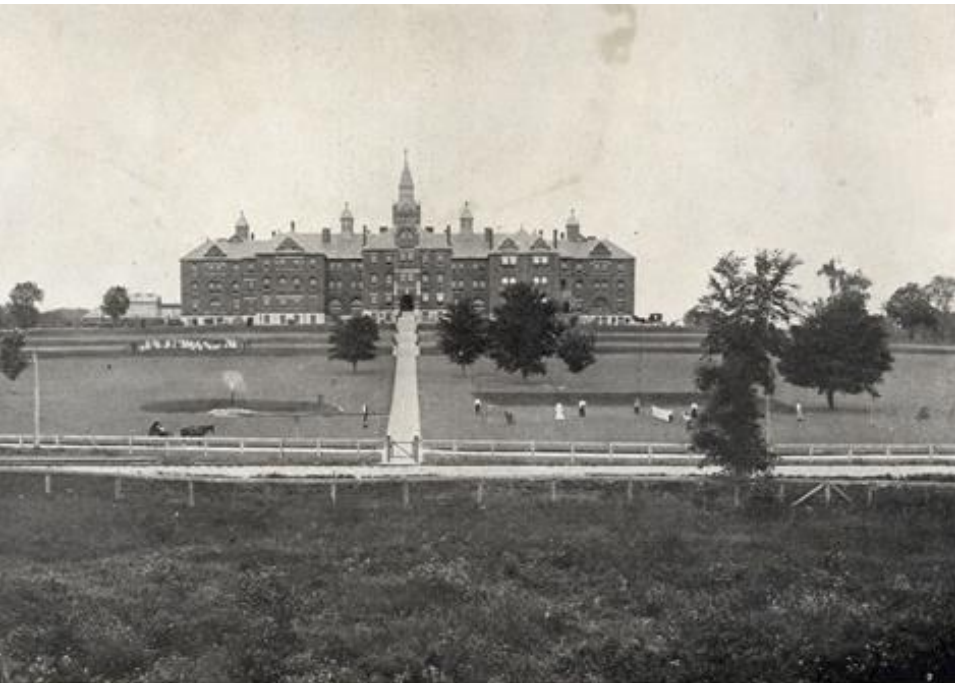


Fig. 29. Archives of Ontario. 1911.



Fig. 30. Geo. 1960.



Our Home At Smokey Hollow



Interior render of Our Home At Smokey Hollow



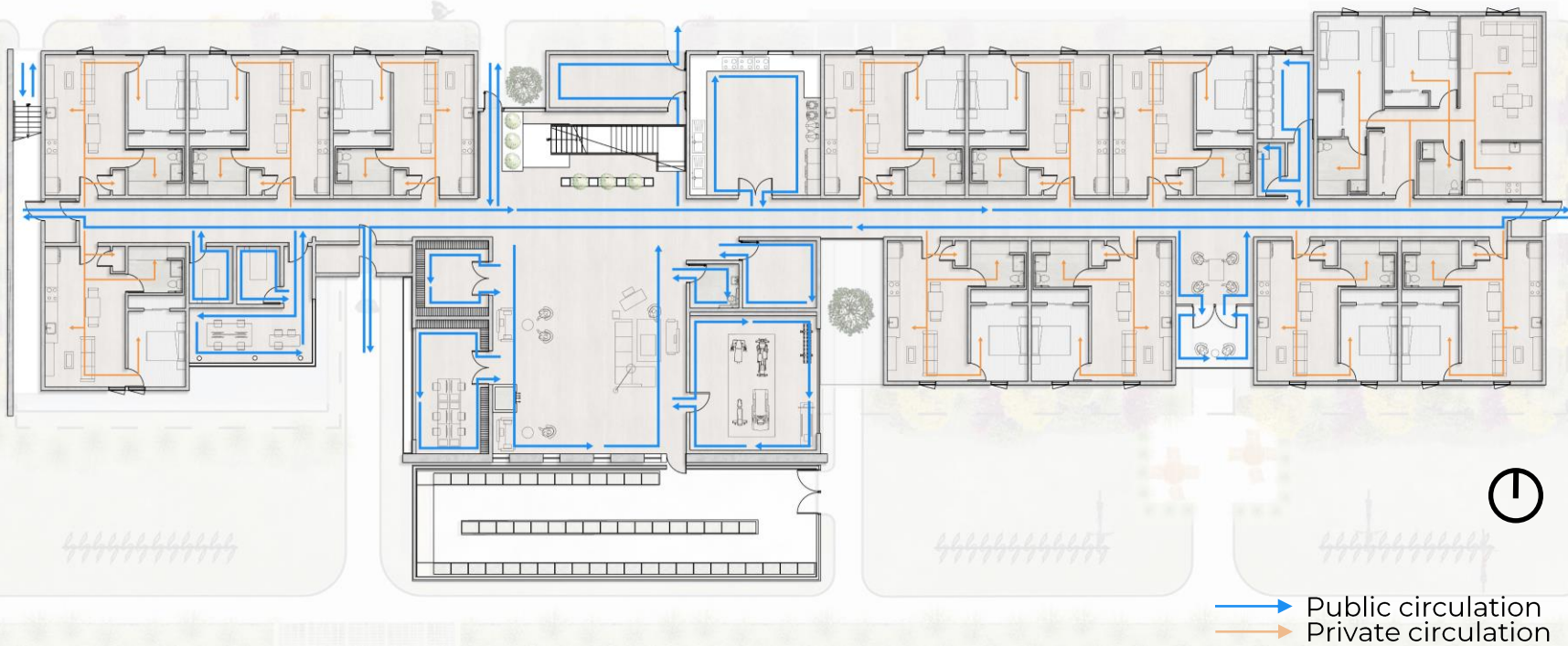
ADA Fit
Layout



Minimalistic
Design



Off-cutty
with Changes



CIRCULATION

MARKET POTENTIAL



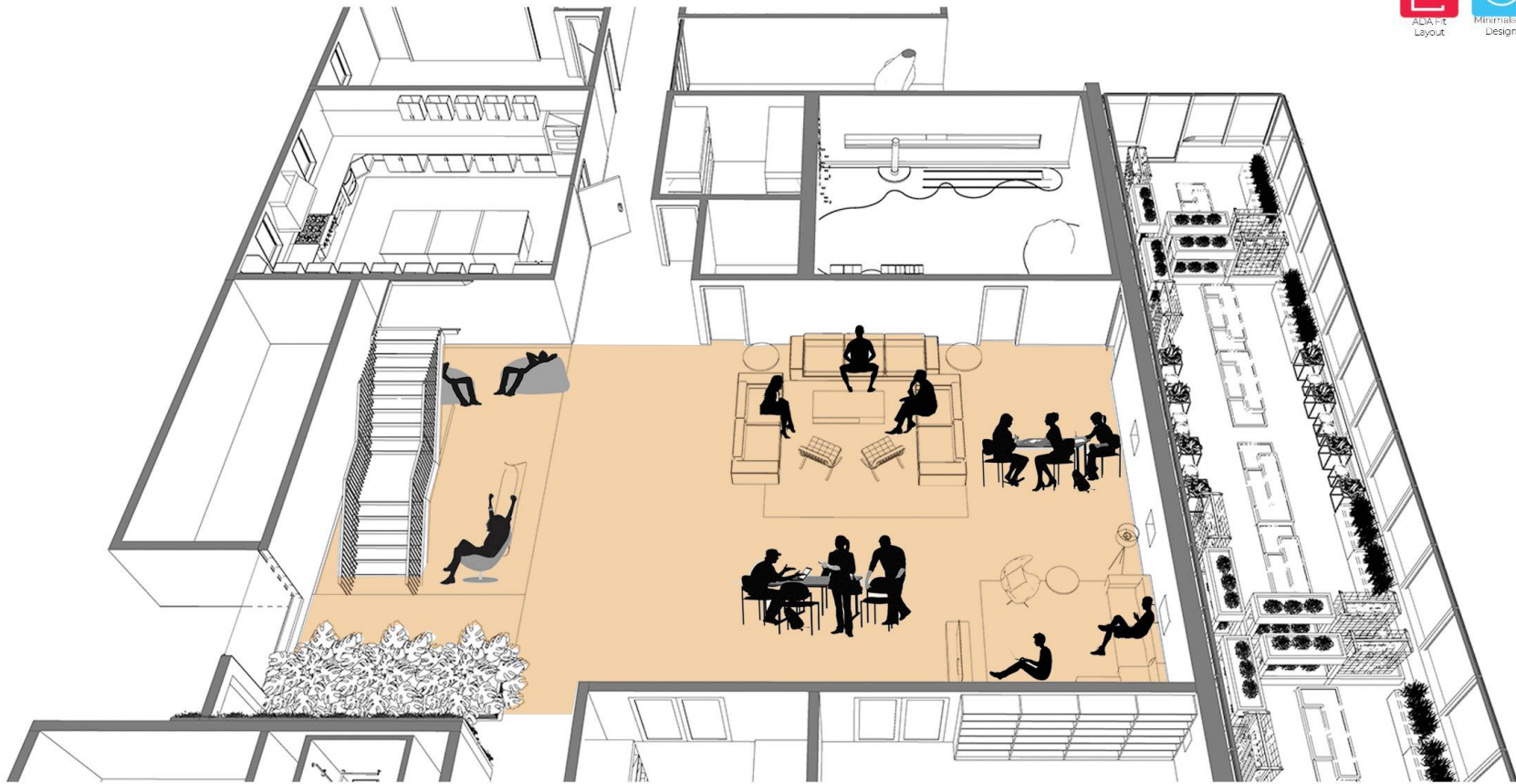
ADA-It
Layout



Minimalistic
Design

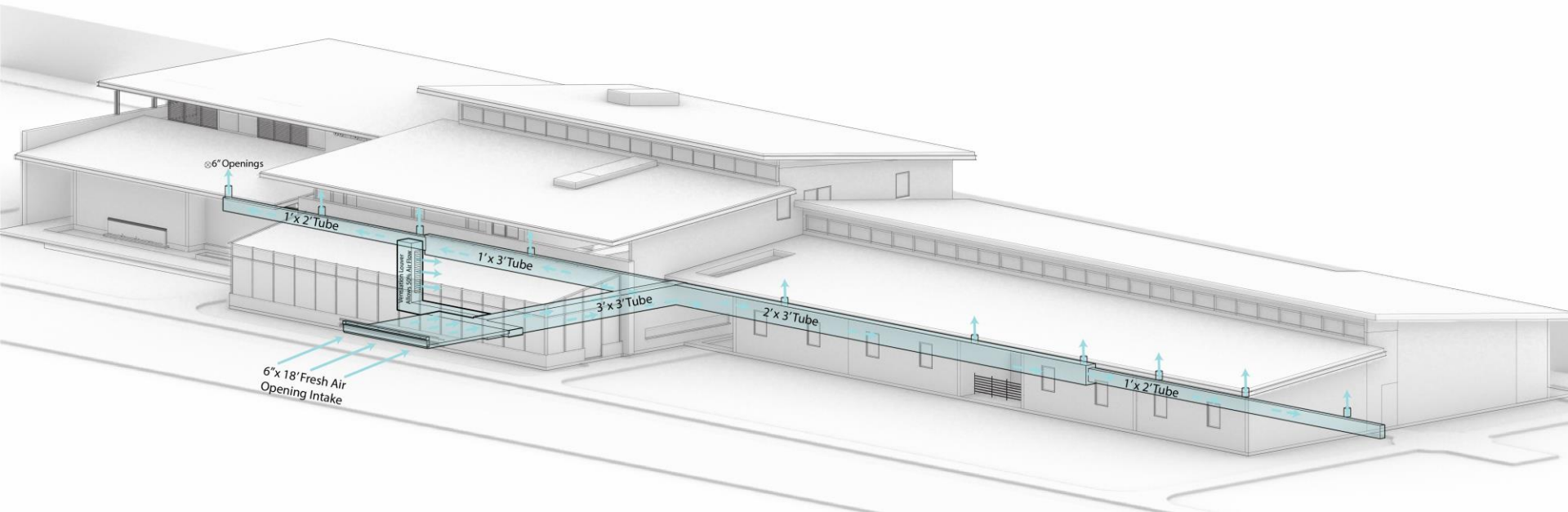


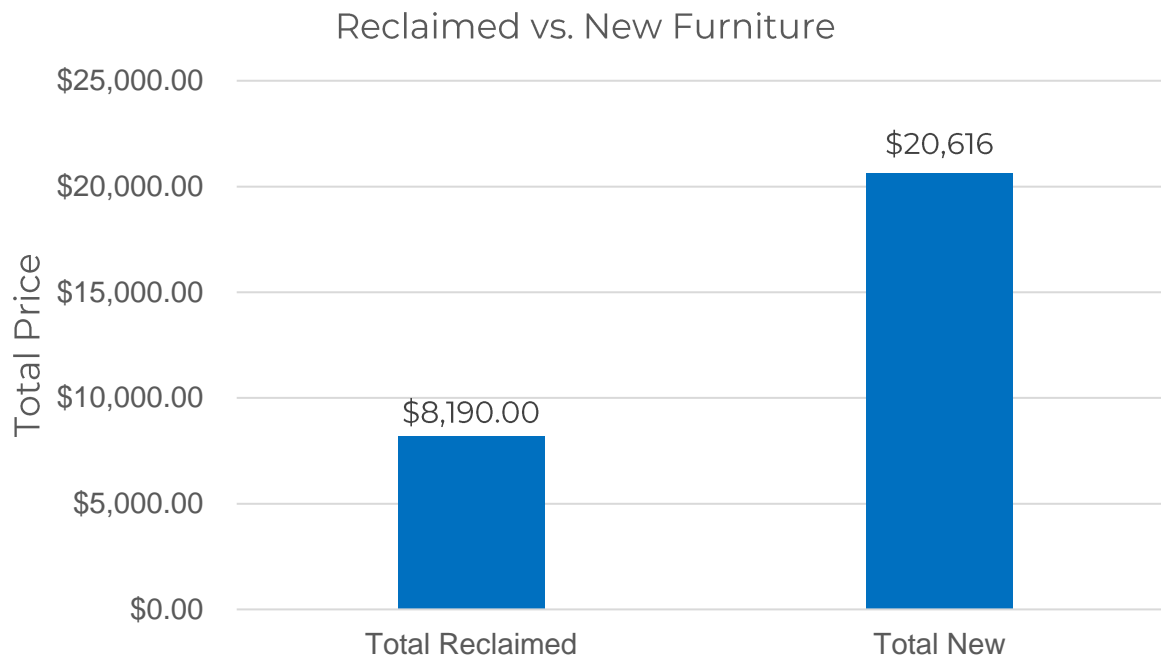
Choice for
Interaction

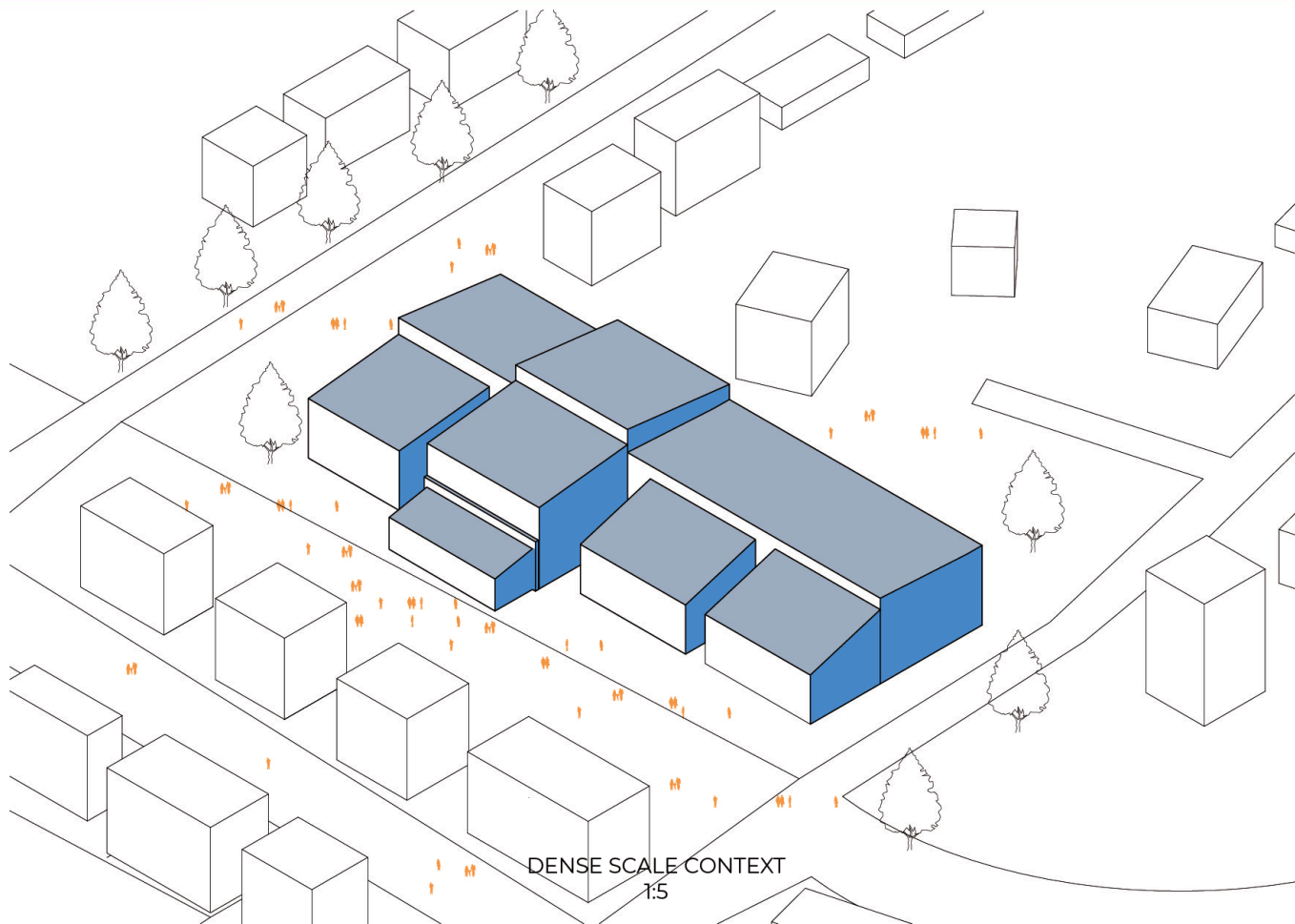


FLEXIBLE SPACES

INNOVATION







DENSE SCALE CONTEXT
1:5

REPLICABILITY

MARKET POTENTIAL

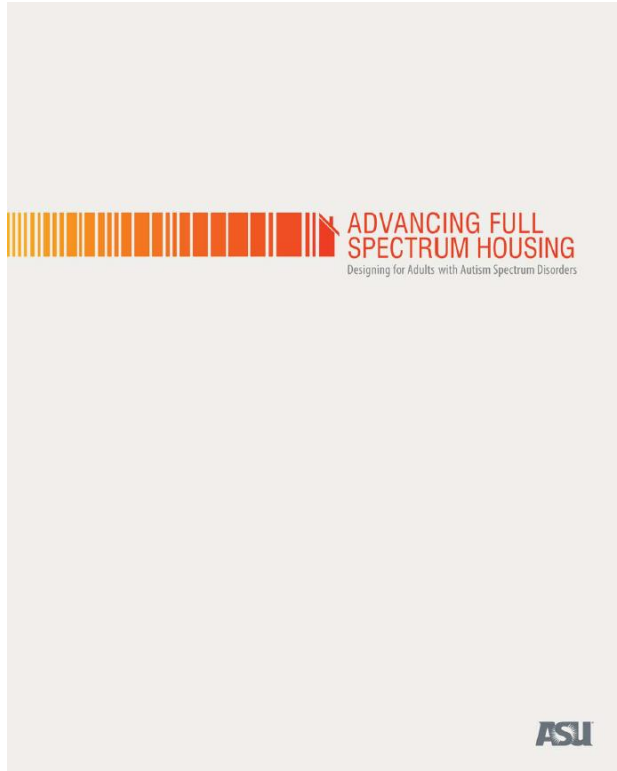


Fig. 31. Ahrentzen 2009

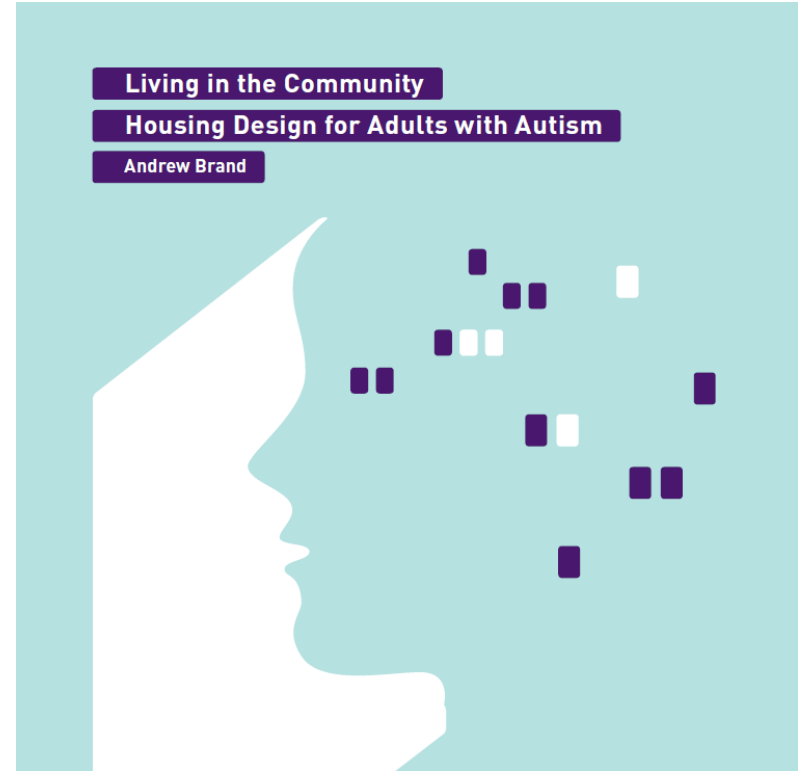
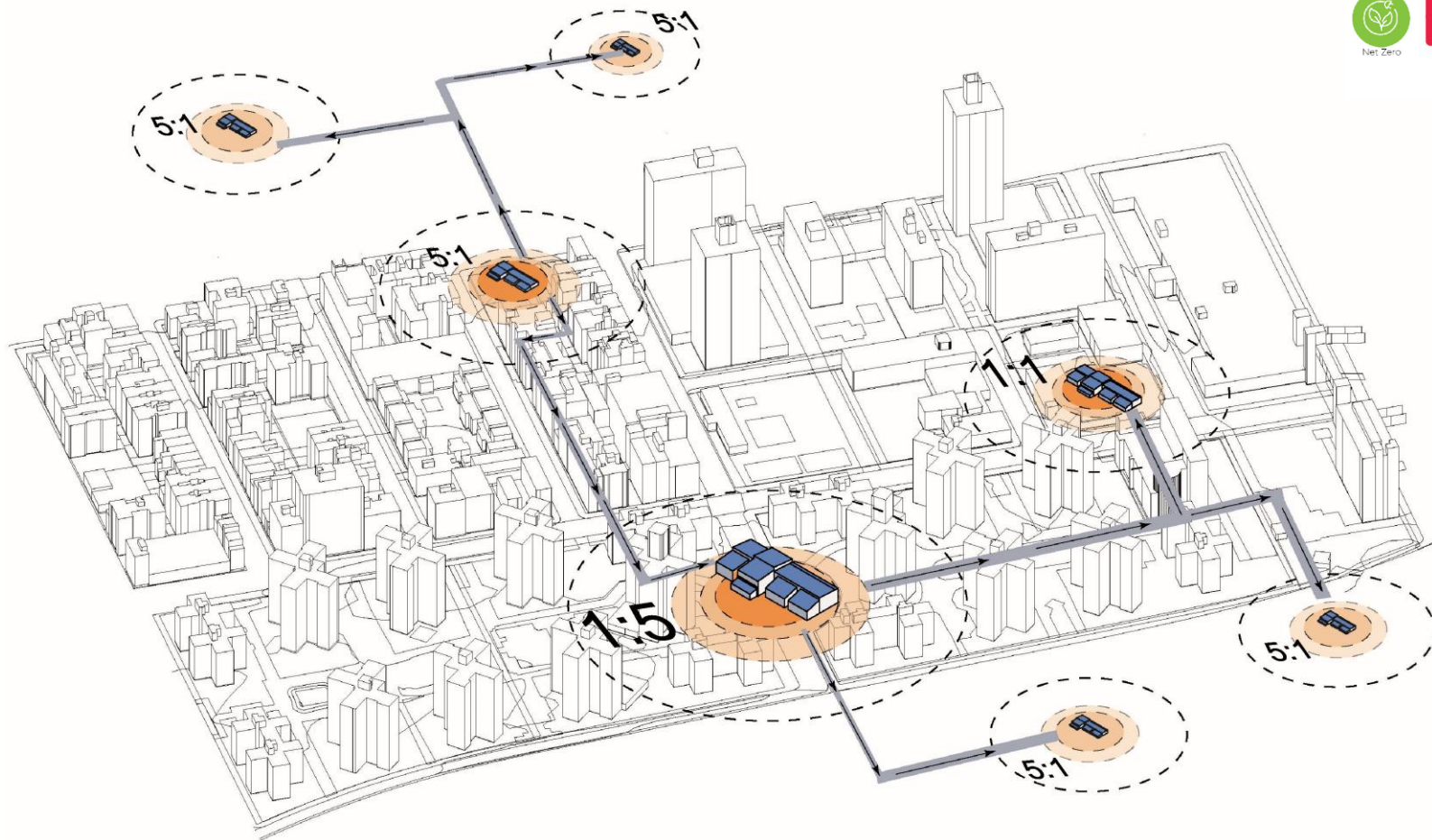


Fig. 32. Brand, 2010..



REPLICABILITY

MARKET POTENTIAL



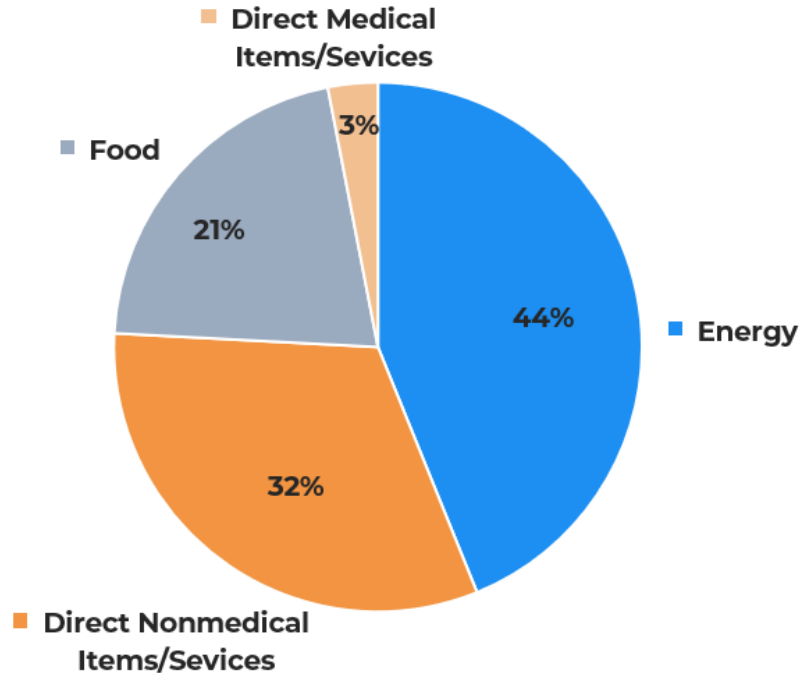
ASD LIFETIME COST OF LIVING

■ **Energy- \$328,619**

■ Direct Nonmedical
Items/Sevices - \$239,306

■ Food - \$158,178

■ Direct Medical
Items/Sevices - \$22,826



Total Cost of Living: \$748,929



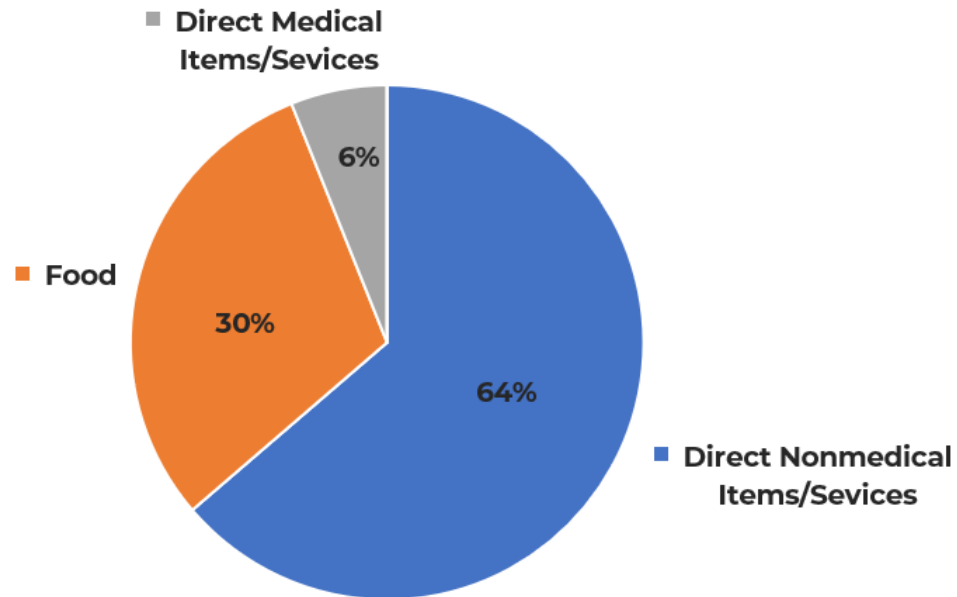
ASD LIFETIME COST OF LIVING AT SMOKEY HOLLOW

■ **Direct Nonmedical Items/Sevices - \$239,306**

■ Food - \$113,435

■ Direct Medical Items/Sevices - \$22,826

■ Energy - \$0



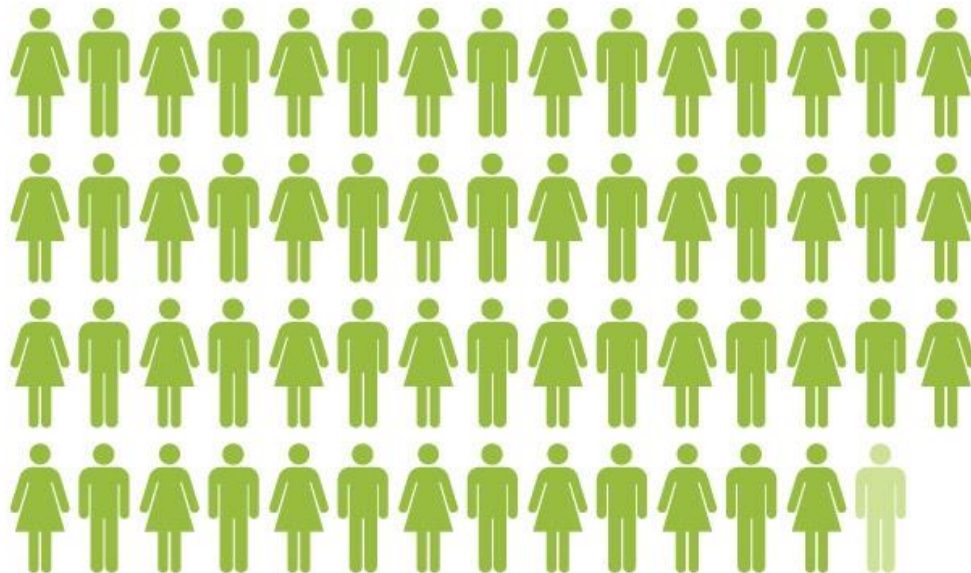
Total Cost of Living: \$375,567



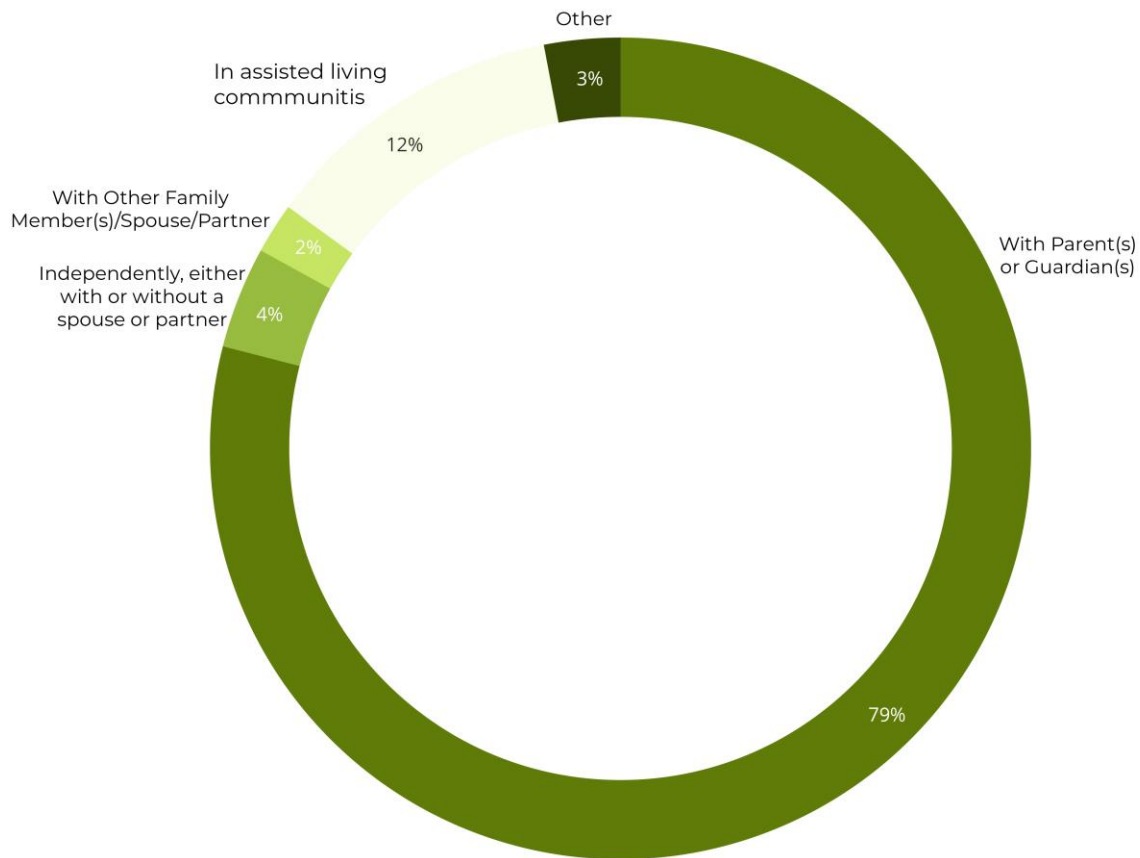
TEAM MEETING THE RESIDENTS



CONCLUSION



In the United States, 1 in 59 births are diagnosed with autism.



In the United States, almost 90% of people with ASD do not have access to assisted living communities



Maggie



Ian



Nate



Mike







STATE UNIVERSITY OF NEW YORK
COLLEGE OF ENVIRONMENTAL
SCIENCE AND FORESTRY

SYRACUSE UNIVERSITY

OUR HOME AT SMOKEY HOLLOW



WORKS CITED

- (1) ADHD & Autism [Digital Image of Logo]. Retrieved April 01,2020, from <https://aapsa.net/>.
- (2) Generac Industrial Power. [Photograph of 200kW Gaseous Generator]. Retrieved March 12,2020, from <https://www.generac.com/Industrial/products/gaseous-generators/configured/200kw-gaseous-generator>
- (3) Trane Trace 3D Plus. [Digital Image of logo]. Retrieved April 01,2020, from <https://www.trane.com/content/dam/Trane/Commercial/global/products-systems/design-analysis-tools/analysis-tools/TRACE-3D-Plus/TRACE3DPlus-video.png>
- (4) Carrier. [Photograph of 38VMR 3-Phase Heat Recovery Unit]. Retrieved March 14,2020, from <https://images.carriercms.com/image/upload/v1547744692/carrier/commercial-hvac/products/variable-refrigerant-flow/carrier-38vmr-vrf-heat-recovery-system-a.jpg>
- (5) Carrier. [Photograph of 40VMW High Wall Indoor Unit]. Retrieved March 14, 2020, from <https://www.carrier.com/commercial/en/us/products/variable-refrigerant-flow/carrier-vrf-products/carrier-vrf-indoor-units/40vmw/>
- (6) RenewAire. [Photograph of HE2XINH]. Retrieved March 26, 2020, from <https://www.renewaire.com/erv/he2xinh/>
- (7) Acoustical Surfaces, Inc. [Digital Image and Photograph of Foam S.T.O.P™ Melamine Foam Linear Wedges and Specifications]. Retrieved March 20, 2020, from https://ye7zs22zd242wmzxo41cj7b5-wpengine.netdna-ssl.com/foam_stop/images/linearwedges_35.pdf
- (8) SANDEN. [Photograph of SANCO₂ Gen₃ Specifications]. Retrieved March 25, 2020, from https://www.sandenwaterheater.com/sanden/assets/File/SANDEN-CO2WaterHeater_11_15_19.pdf
- (9) Niagara. [Photograph of Niagara® The Original™ 0.8 GPF Single Flush Toilet]. Retrieved April 01, 2020, from https://niagaracorp.com/wp-content/uploads/2016/10/Stealth_Original_N7717-N7714TFH.pdf
- (10) Niagara. [Photograph of Niagara® Tri-Max™ Fixed Mount Aerator]. Retrieved April 01, 2020, from https://niagaracorp.com/wp-content/uploads/2016/10/BathAerator_TriMax_RemovableThread.pdf
- (11) Niagara. [Photograph of Niagara HealthGuard™ Handheld Showerhead]. Retrieved April 01, 2020, from [://niagaracorp.com/wp-content/uploads/2019/07/HealthGuard_Handheld_SpecSheet.pdf](https://niagaracorp.com/wp-content/uploads/2019/07/HealthGuard_Handheld_SpecSheet.pdf)
- (12) Brilli. [Brilli Logo]. Retrieved April 04, 2020, from <https://help.bibrilli.com/hc/en-us>.
- (13) Brilli. [Photograph of Get In Sync 5/6" Circadian LED Downlight]. Retrieved March 15, 2020, from <https://www.bibrilli.com/products/get-in-sync-5-6-led-integrated-recessed-downlight?variant=15687984152625>
- (14) Energy Star. [Digital Image of Logo]. Retrieved April 05, 2020, from <https://www.energystar.gov/>.
- (15) WELL Building Institute. [Digital Image of Logo]. Retrieved April 05, 2020, from <https://aquilacommercial.com/wp-content/uploads/2019/08/WELL-Logo.jpg>
- (16) Corgan. (Producer) *Normal Circadian Rhythm vs. Disrupted Circadian Rhythm during travel*. [Photograph]. Retrieved March 15, 2020, from <https://www.corgan.com/story/the-airport-that-fights-jet-lag/>
- (17) Prims Solar. [Digital Image of Logo]. Retrieved March 12, 2020, from <https://www.primsolar.com/our-products>.
- (18) Prisms Solar. [Photograph of Classic Premium Line bifacial cells]. Retrieved March 12, 2020, from <https://www.primsolar.com/our-products>.



WORKS CITED

- (19) Honeywell. [Digital Image of Honeywell Building Integration Software Connection Diagram]. Retrieved March 29, 2020. <https://customer.honeywell.com/resources/techlit/TechLitDocuments/63-0000s/63-9644.pdf>
- (20) Home Depot. [Photograph of Kidde Battery Operated TruSense Smoke and Carbon Monoxide Detector with Voice Alert]. Retrieved March 28, 2020, from https://www.homedepot.com/p/Kidde-Battery-Operated-TruSense-Smoke-and-Carbon-Monoxide-Detector-with-Voice-Alert-21028499/310004997?mtc=Shopping-VF-F_D27E-G-D27E-27_5_SAFETY_SECURITY-KIDDE-NA-NA-PLA-NA-NA-New_Engen_THD&cm_mmc=Shopping-VF-F_D27E-G-D27E-27_5_SAFETY_SECURITY-KIDDE-NA-NA-PLA-NA-NA-New_Engen_THD-71700000058176805-58700005363339108-92700048720872543&gclid=EAlaIqobChMlOr9mebl6AlvtQiICR09DayDEAQYAyABEgJ3r_D_BwE&gclsrc=aw.ds
- (21) Harris Communications. [Photograph of Serene Innovations SS-201 Super Shaker Bluetooth Bed Shaker]. Retrieved March 29, 2020, from <https://www.harriscomm.com/serene-innovations-ss-201-super-shaker-bluetooth-bed-shaker.html>
- (22) LUX. [Photograph of KONO Smart]. Retrieved March 26, 2020, from <https://shop.luxproducts.com/collections/frontpage/products/kono-smart?variant=51142739605>
- (23) Best Buy. [Photograph of Insignia™ - 9.2 Cu. Ft. Bottom-Freezer Refrigerator- White]. Retrieved March 18, 2020, from [://www.bestbuy.com/site/insignia-9-2-cu-ft-bottom-freezer-refrigerator-white/6220702.p?skuld=6220702&ref=212&loc=1&ref=212&loc=1&ds_rl=1260669&ds_rl=1273104&ds_rl=1273104&gclid=EAlaIqobChMlI6L3qefl6AIVBT0MCh0g2g1gEAQYBCABEgJVI_D_BwE&gclsrc=aw.ds](https://www.bestbuy.com/site/insignia-9-2-cu-ft-bottom-freezer-refrigerator-white/6220702.p?skuld=6220702&ref=212&loc=1&ref=212&loc=1&ds_rl=1260669&ds_rl=1273104&ds_rl=1273104&gclid=EAlaIqobChMlI6L3qefl6AIVBT0MCh0g2g1gEAQYBCABEgJVI_D_BwE&gclsrc=aw.ds)
- (24) Energy Star. [Photograph of SAMSUNG – WF50R85**A*]. Retrieved April 9, 2020 from <https://www.energystar.gov/productfinder/product/certified-clothes-washers/details/2341069>
- (25) One-Click LCA. [Digital image]. Retrieved March 23, 2020, from <https://www.360optimi.com/app/sec/entity/show?entityId=5e5ffccf63a22f68586000e3&name=JeanClaude+Rigano&showToolsNote=true>
- (26) NYSERDA [Digital Image of Logo]. Retrieved April 01,2020, from <https://newbuildings.org/wp-content/uploads/2017/08/NYSERDA-Logo.png>
- (27) [Digital Image of Autodesk Revit Logo]. Received April 02,2020, from <https://www.microdesk.com/wp-content/uploads/2019/04/revit-header.png>.
- (28) [Digital Image of AGACAD Logo]. Received April 02,2020 , from https://encrypted-tbn0.gstatic.com/images?q=tbn%3AAND9GcQmxImLevEG56ITJ_Gxc6Hy2OC_5tEe3bJ6lWx__knMBjpuT7P&usqp=CAU
- (29) Archives of Ontario. (1911). *Ontario Hospital School, Orillia (Huron Regional Center)*. (Photograph). Retrieved April 9,2020, from <https://www.mcass.gov.on.ca/en/dshistory/firstInstitution/firstInstitutionPhotos.aspx>
- (30) Geo, Mario. (Photographer). (1960). [Photograph of dormitory in Ontario Hospital School]. Retrieved April 9, 2020, from https://www.thestar.com/news/canada/2013/09/16/huronia_regional_centre_classaction_lawsuit_set_to_begin_over_alleged_abuse.html
- (31) Ahrentzen, Sherry. (Producer). (2009). *Advancing Full Spectrum Housing; Designing for Adults with Autism Spectrum Disorders*. (Digital Publication Cover). Retrieved October 23, 2020, from <https://sustainability.asu.edu/stardust/project-archive/advancing-full-spectrum-housing/>
- (32) Brand, Andrew. (Author). (2010). *Living in the Community; Housing Design for Adults with Autism*. [Digital Publication Cover]. Retrieved October 12, 2020, from https://www.researchgate.net/publication/228448997_Living_in_the_Community_Housing_Design_for_Adults_with_Autism