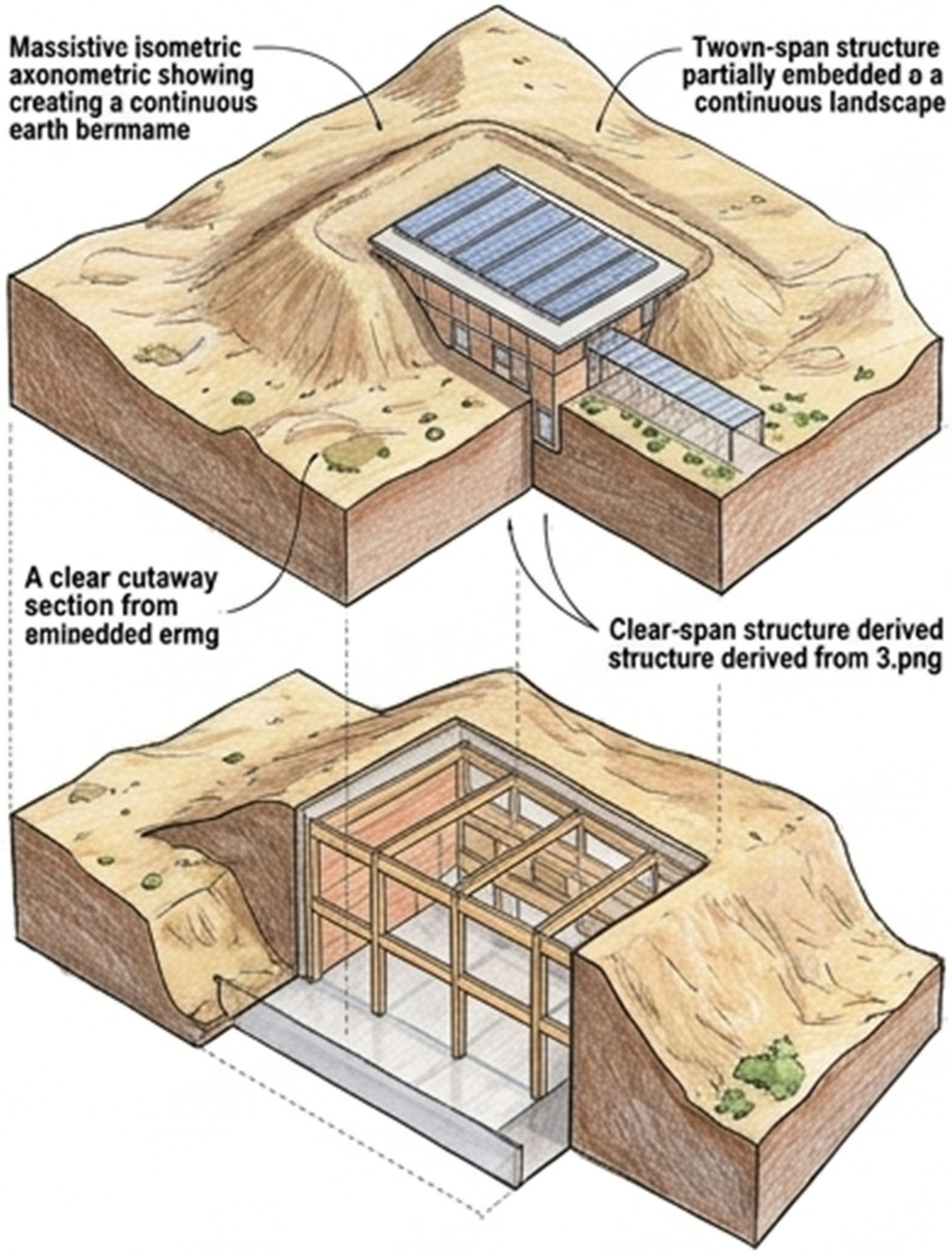
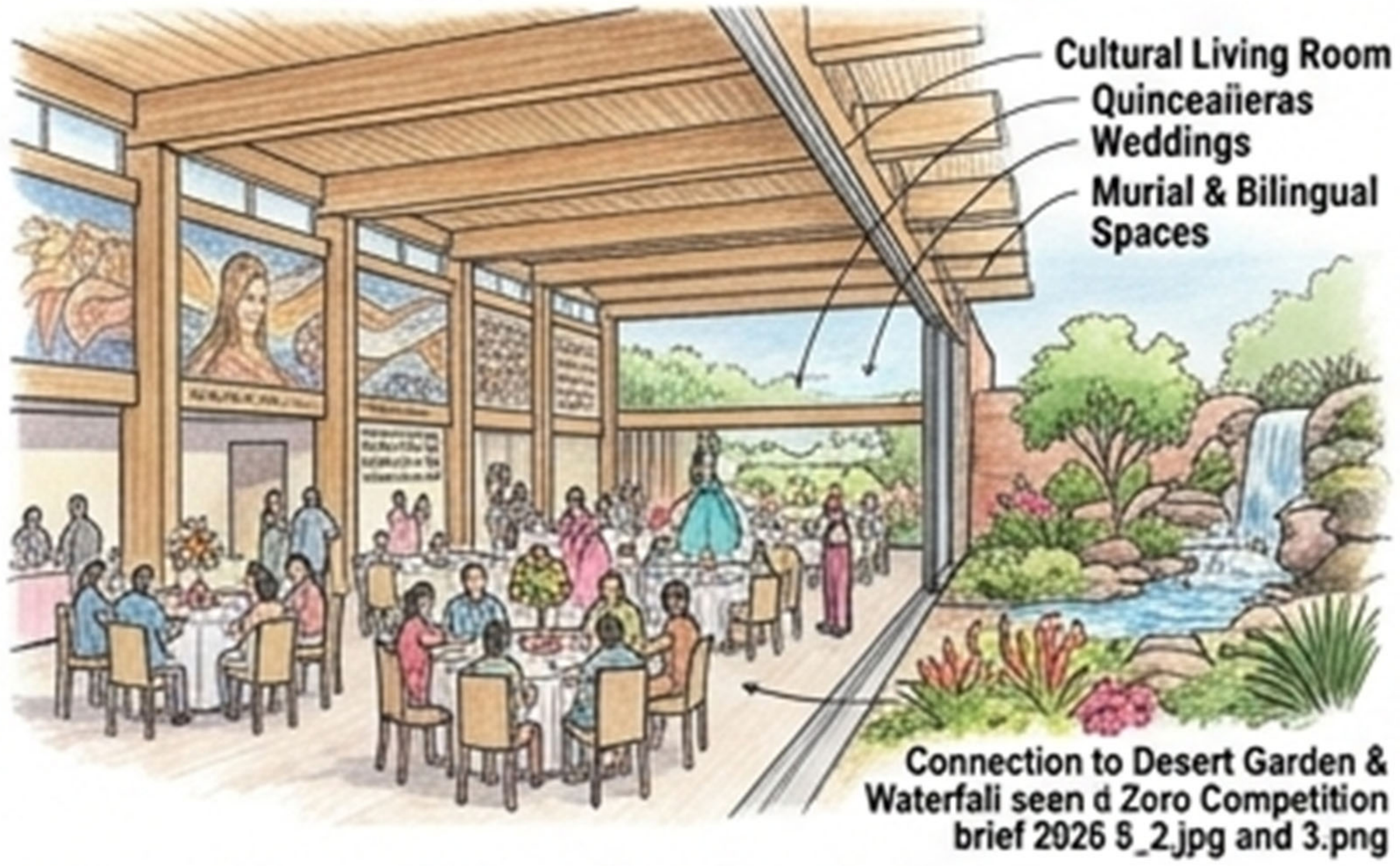
PROJECT NARRATIVE: LA PLAZA

CONCEPT: SUB-DESERT EARTH-COUPLED HUB



CULTURAL LIVING ROOM

THE SUB-DESERT EARTH-COUPLED HUB



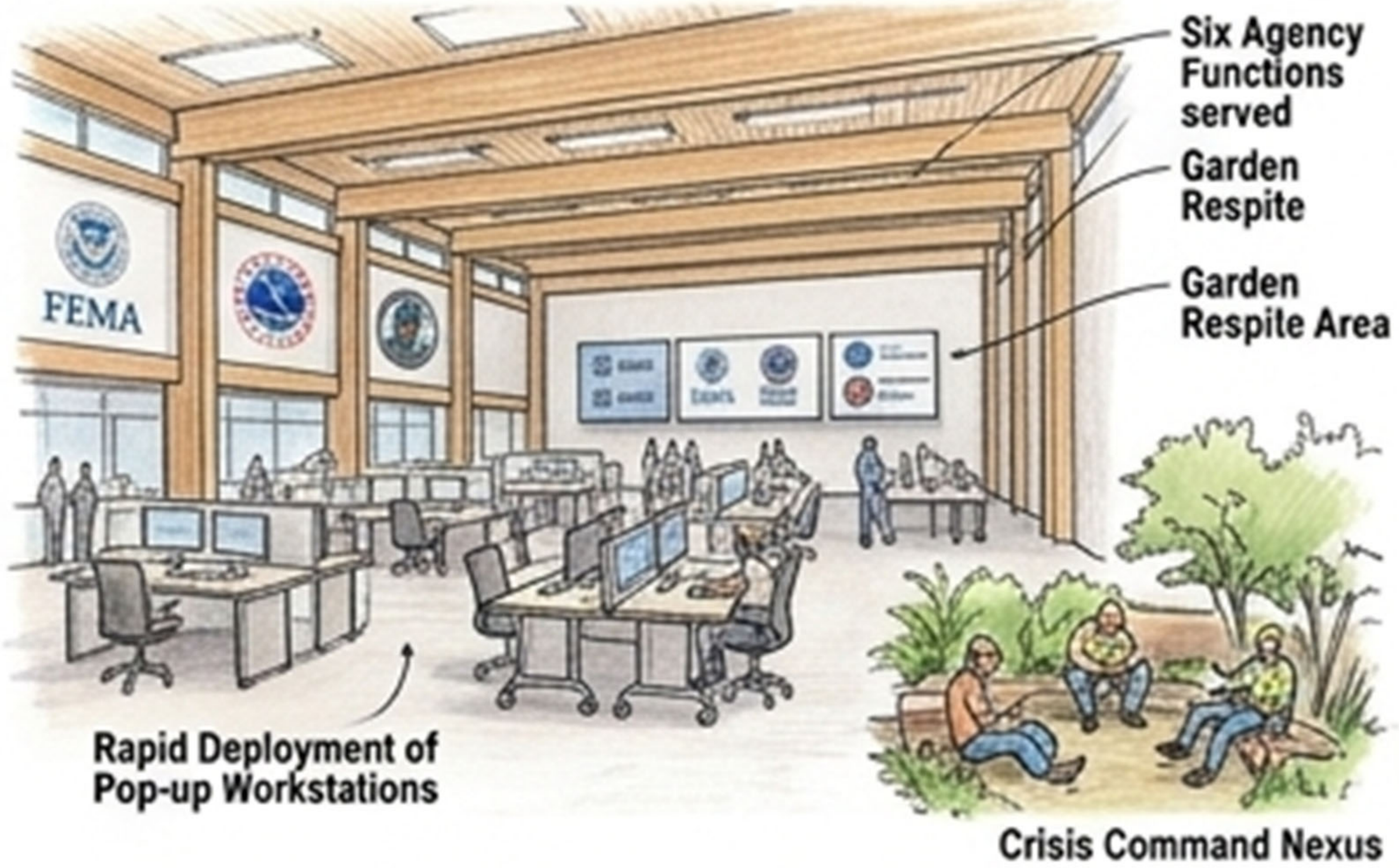
CULTURAL LIVING ROOM (MODE 1)

La Plaza introduces *The Sub-Desert Earth-Coupled Hub*, a two-story resilience center that uses massive berms of native desert earth to create a protected, cool sanctuary for community and crisis allke. During normal times, La Plaza actsa a true cultural living room for the Antelope Valley Latino community, providing a welcoming home for quinceañeras, weddings, and weekly multi-generational family gatherings. The spacious open-plan assembly hall is wrapped in warm wood textures from its mass timber framing, a large community mural, and bilingual sign systems. Expansive glass pocket doors along the entire southern wall fully open, merging the interior with the existing desert garden, and its waterfall, creating a seamless connection to nature for community exhibitions and performances. In a crisis, this same building instantly transforms into an Emergency Operations Center, shifting from celebration to crisis command without any physical reconfiguration. The open floor plan and clear-span structu:allow for rapid deployment of pop-upan structure allow for the rapid deployment of pop-up workstations and data screens. This hub serves six key agency functions, including the National Weather Service and the National Guard, providing a unified location for a coordinated disaster response, while the adjacent desert garden becomes a place of essential respite for exhausted emergency workers.

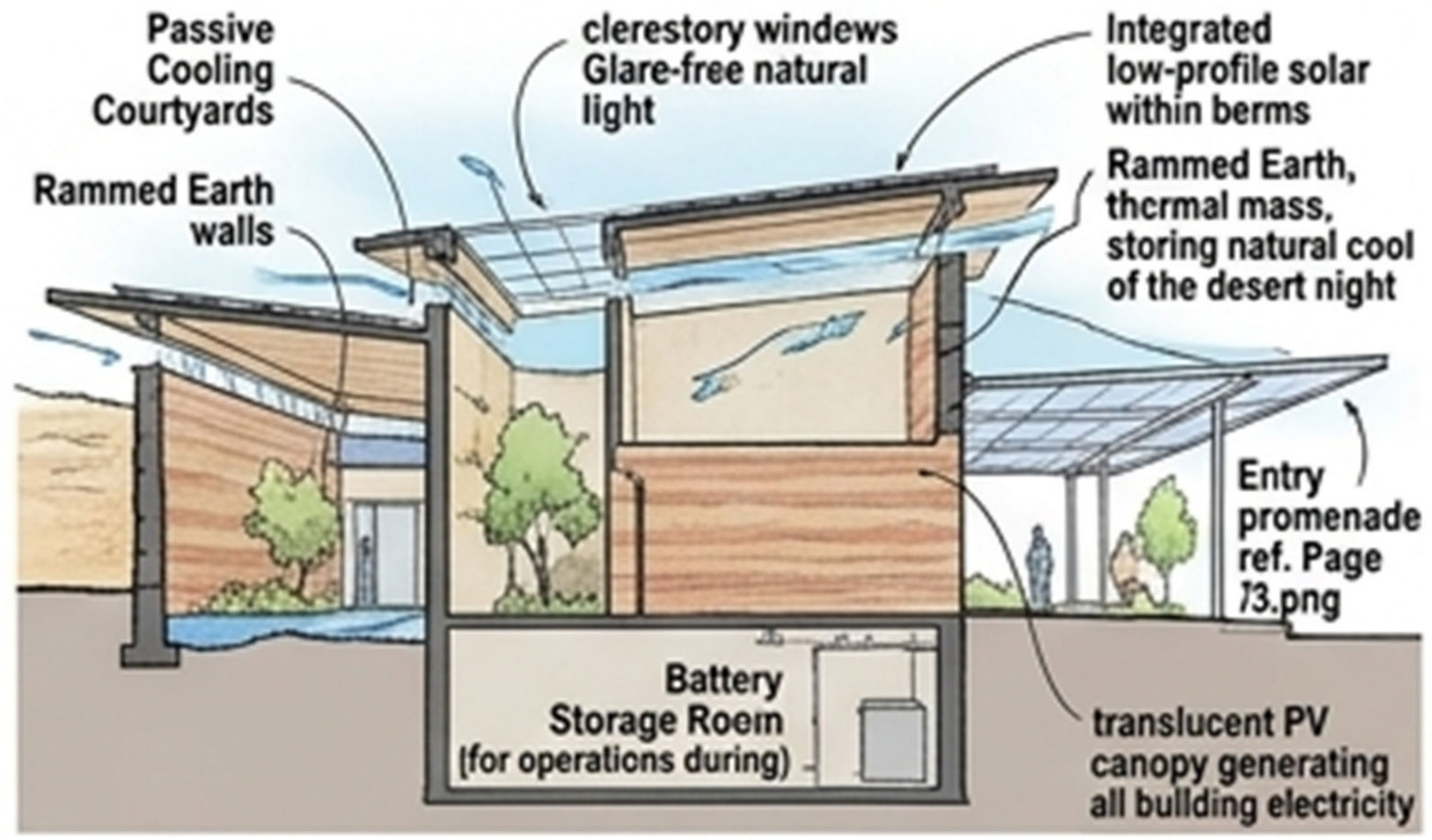
La Plaza is built for the extremes of the Mojave Desert climate. Deep overhanging eaves block the powerful summer sun. Thick thermal mass walls of rammed earth store the natural cool of the desert night to maintain stable indoor temperatures throughout the hot day. Clerestory windows provide glare-free natural light, while an array of low-profile solar panels on the roof and a translucent solar canopy over the entry promsnade generate all the building's electricity. A large battery storage room ensures continuous power and operations during grid outages.

This design serves equity for a Latino community that is both disproportionately vulnsrable during regional emergencies and richly deserving of a public building of genuine cultural dignity. La Plaza stands as a lasting, beautiful, and functional asset for Antelope Valley, a trusted anchor point that provides identity and safety for generations.

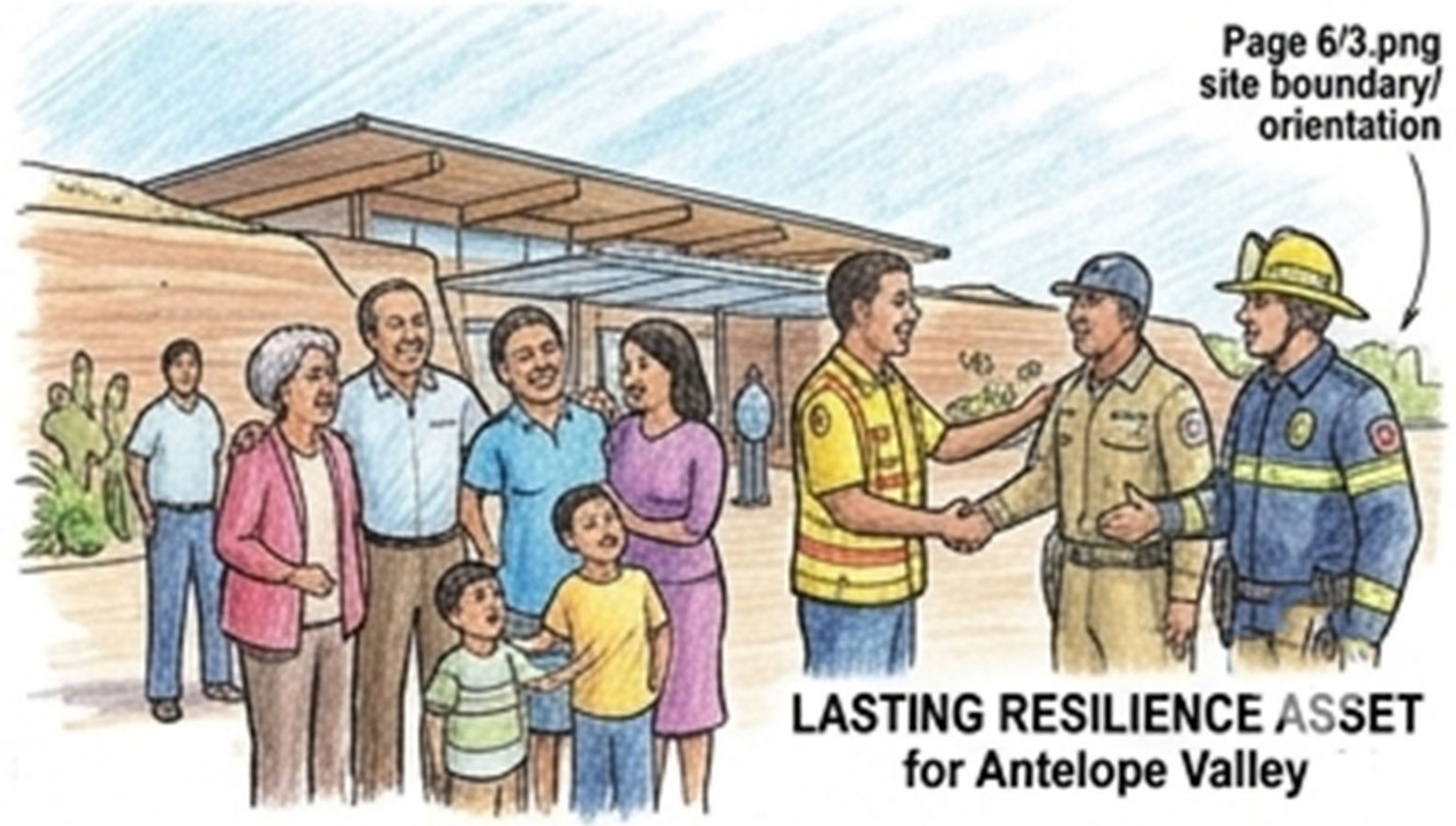
CRISIS COMMAND (EOC MODE 2)



CLIMATE & ZNE OPERATION



EQUITY & RESILIENCE ASSET



LA PLAZA RESILIENCE HUB: DETAILED SITE PLAN & TECHNICAL STUDIES

Rammed Earth / Terracotta Facade swatches

Rammed Earth swatch

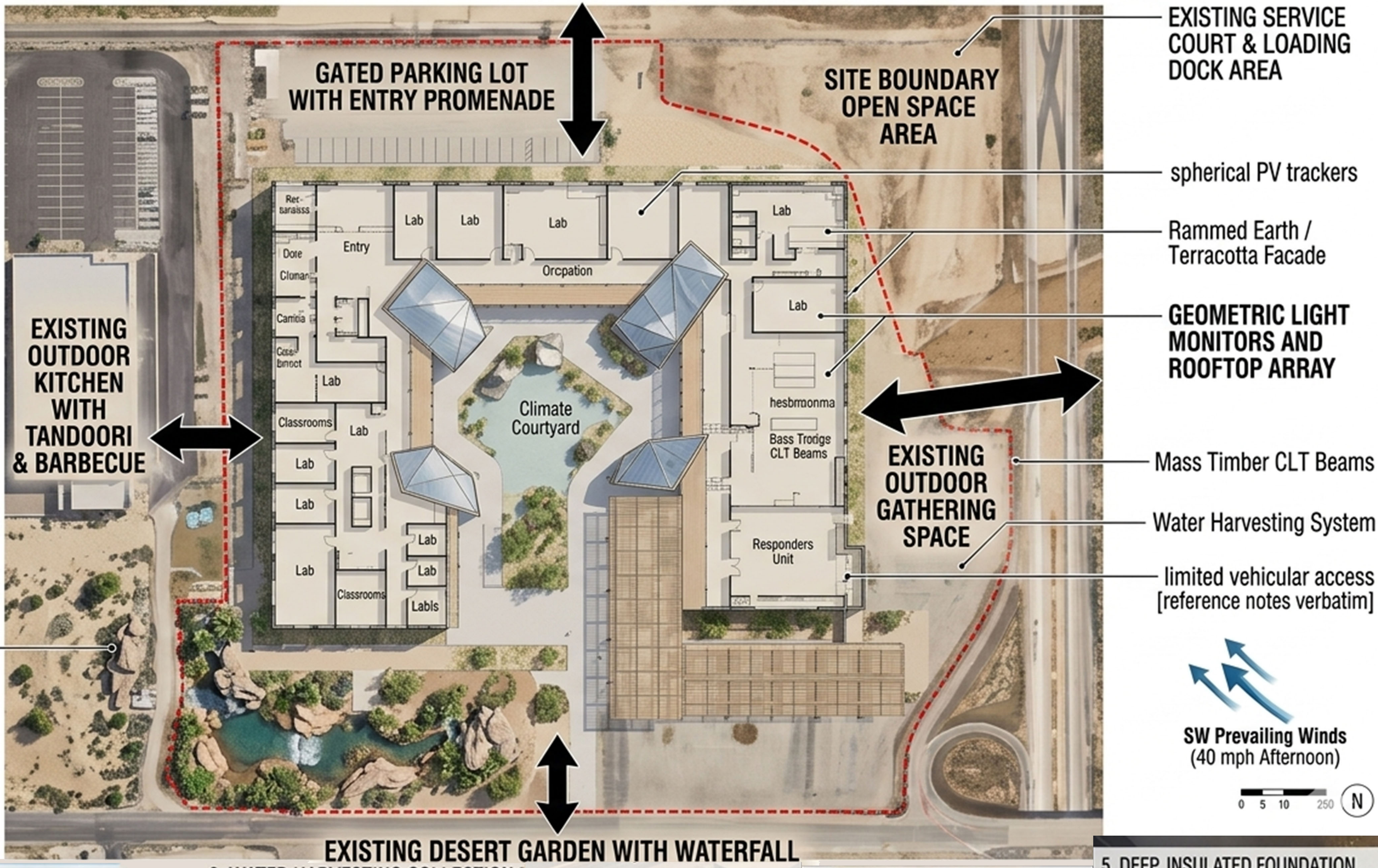
Mass Timber swatch

Mass Timber swatch

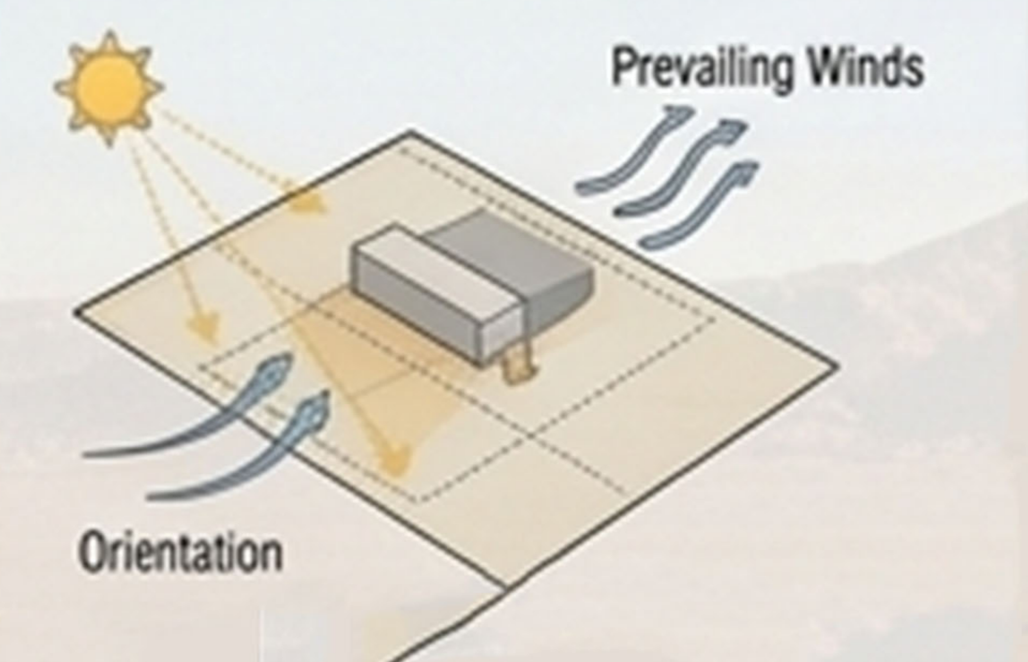
Spherical PV trackers

swatch

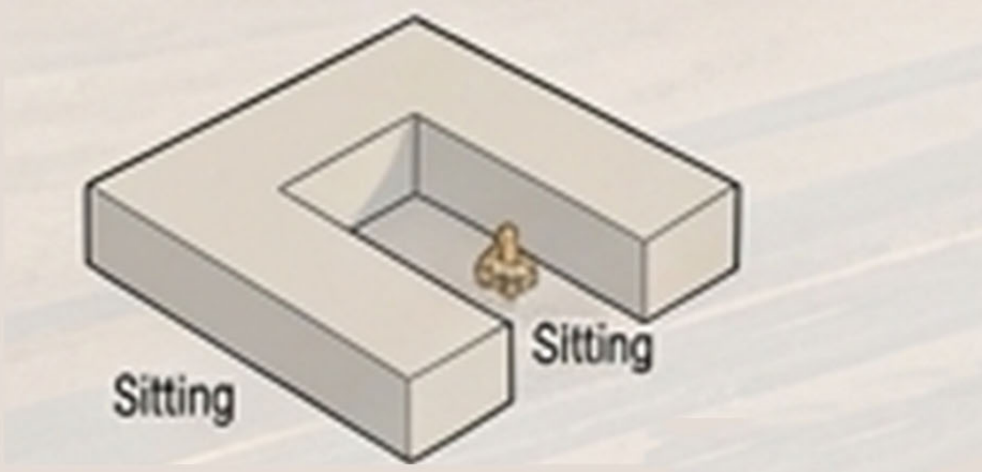
Water Harvesting System collection details



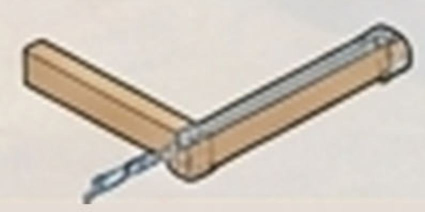
1. GREEN ROOF MATRIX, LIGHT



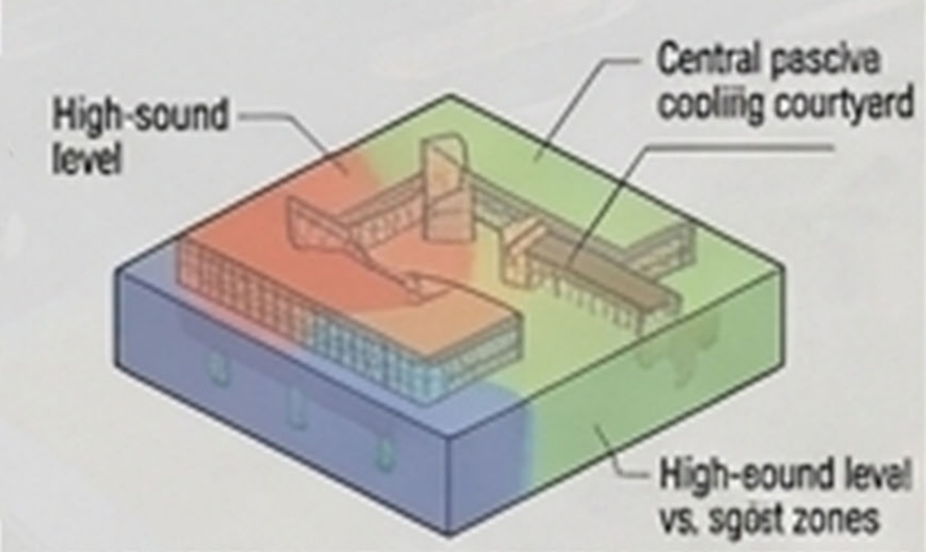
2. WATER HARVESTING COLLECTION



3. CLT BEAM SYSTEM & INTEGRATED WATER HARVESTING

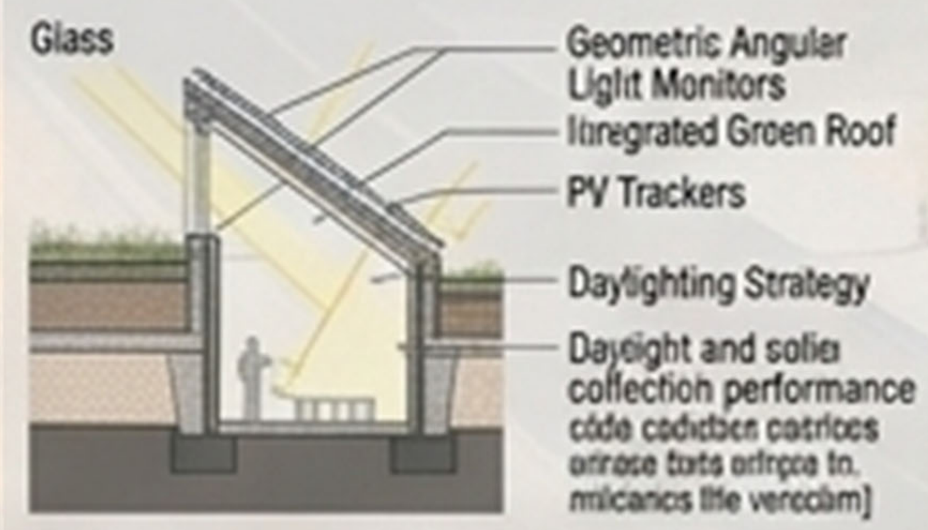


4. CLIMATE COURTYARD & RESPONSE ZONES



LA PLACA PRDGRAMMATIC AGJACENCIES & ACCOUSTIC ZONES

5. DEEP, INSULATED FOUNDATION & EARTH-COUPLED THERMAL MASS



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Sheet 3A - FLOOR PLANS: CULTURAL CENTER ADAPTATION

Sheet 3A & 3B - FLOOR PLANS: EMERGENCY OPERATIONS CENTER

LA PLAZA RESILIENCE HUB:

MATERIAL LEGEND
[ref <IMAGE 1>]

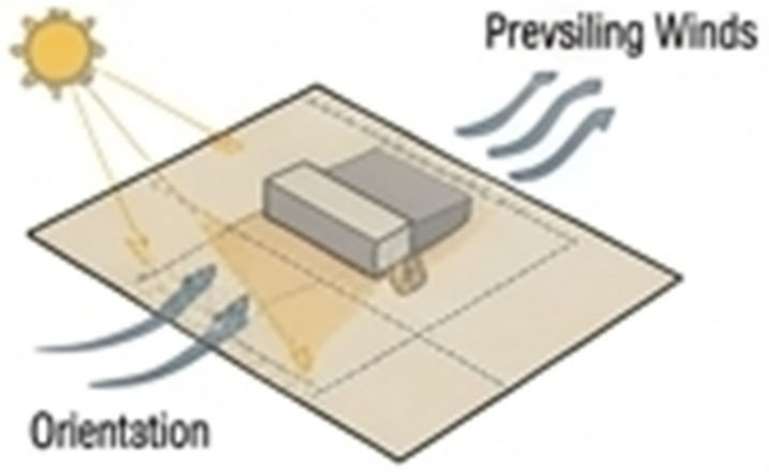
Rammed Earth Terracotta

Mass Timber swatch

Spherical PV trackers

SITE PLAN & TECHNICAL STUDIES
[ref <IMAGE_2>]

1. GREEN ROOF MATRIX



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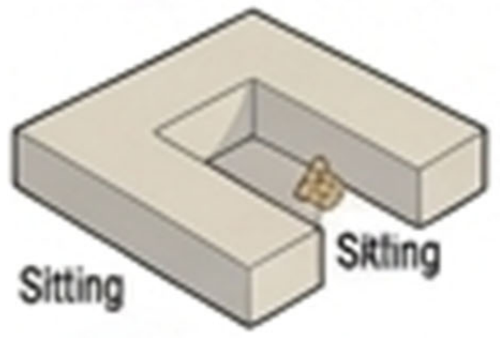
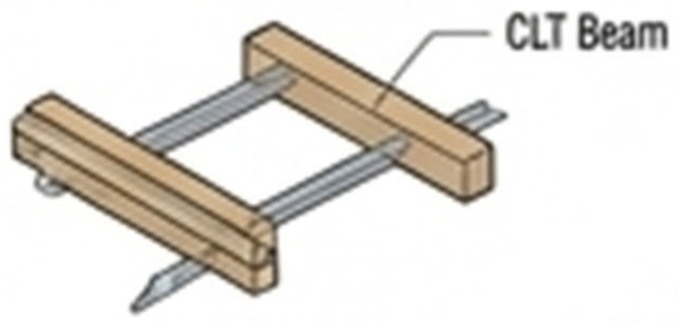
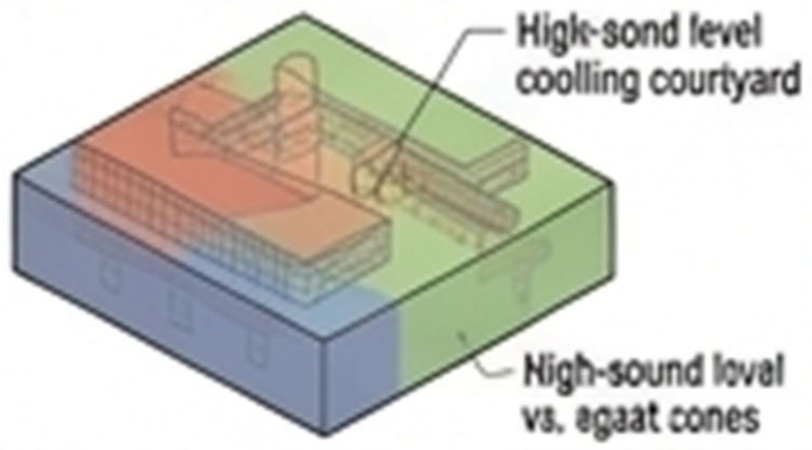


3. CLT BEAM SYSTEM



4. CLIMATE COURTYARD



LA PLAZA RESILIENCE HUB: - ILLUSTRATED SECTIONS (SUB-DESERT EARTH-COUPLED HUB)

Rammed Earth / Terracotta Facade swatches

Rammed Earth swatch

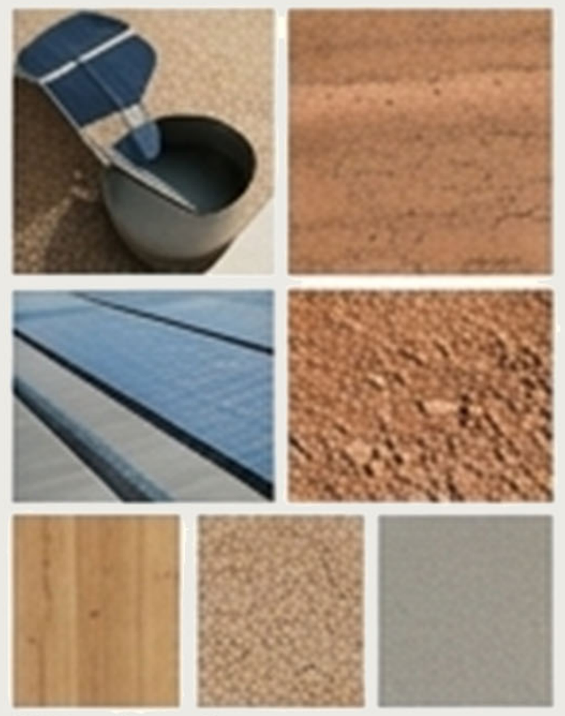
Mass Timber swatch

Mass Timber swatch

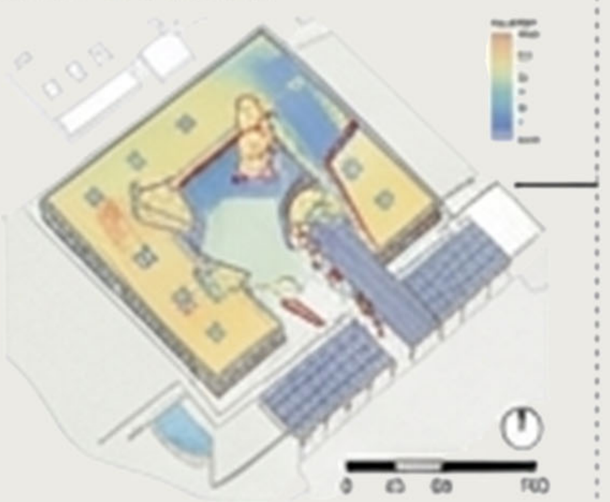
Spherical PV trackers

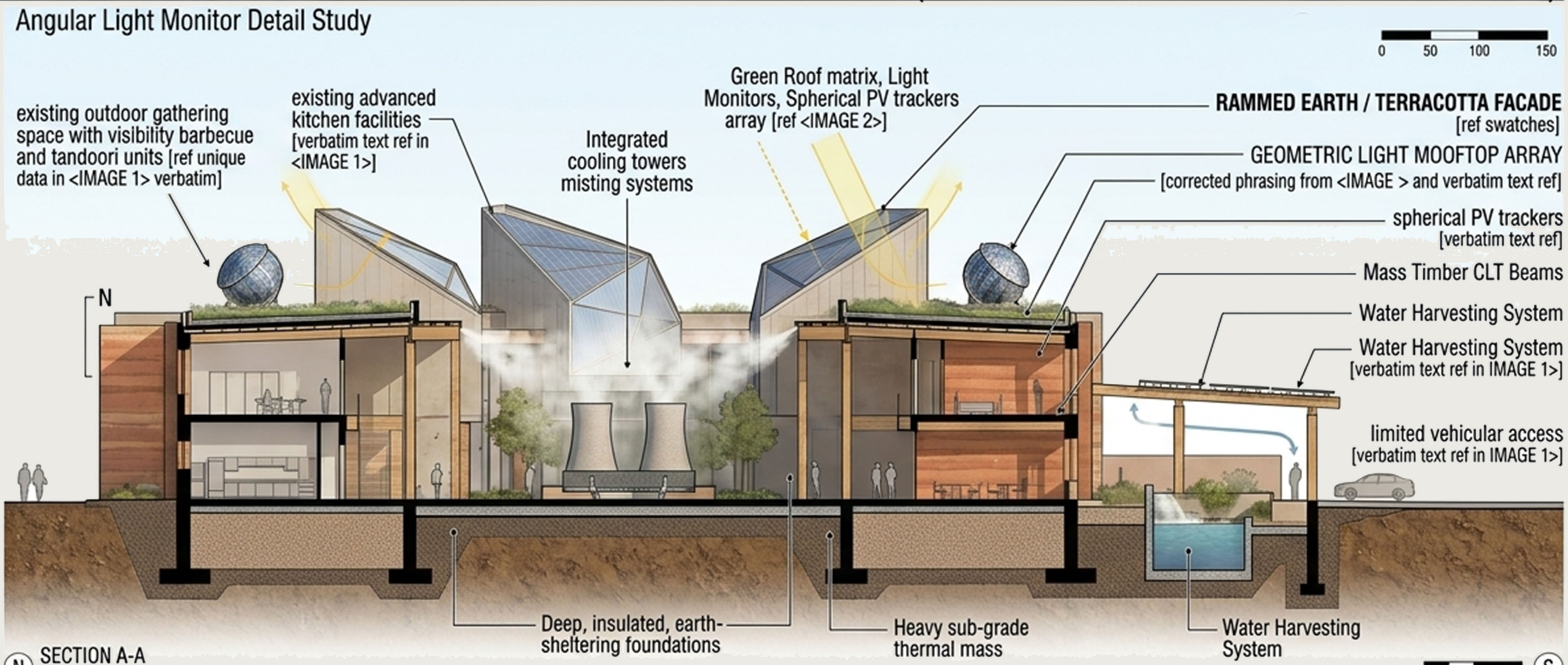
swatch

Water Harvesting System collection details



Site Context





SECTION A-A

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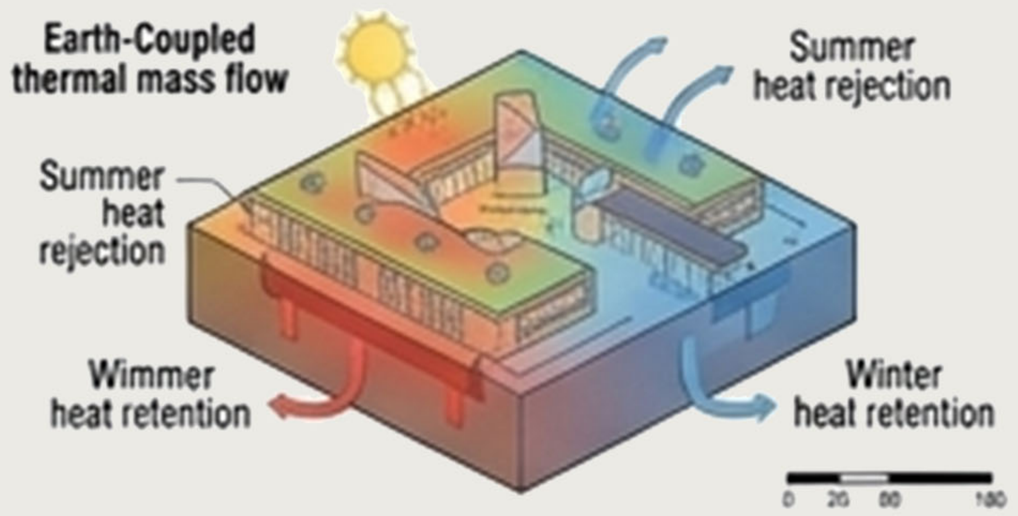
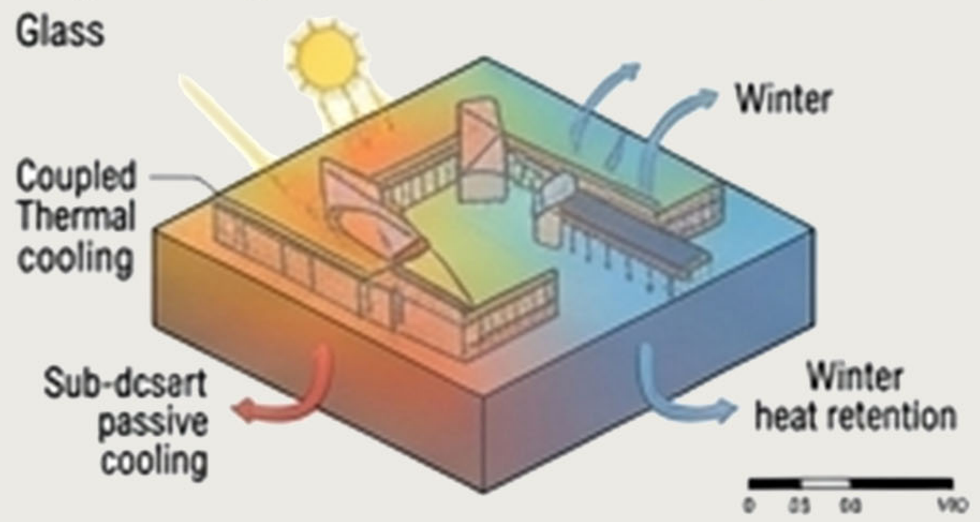
Thermil Study Study Diagram



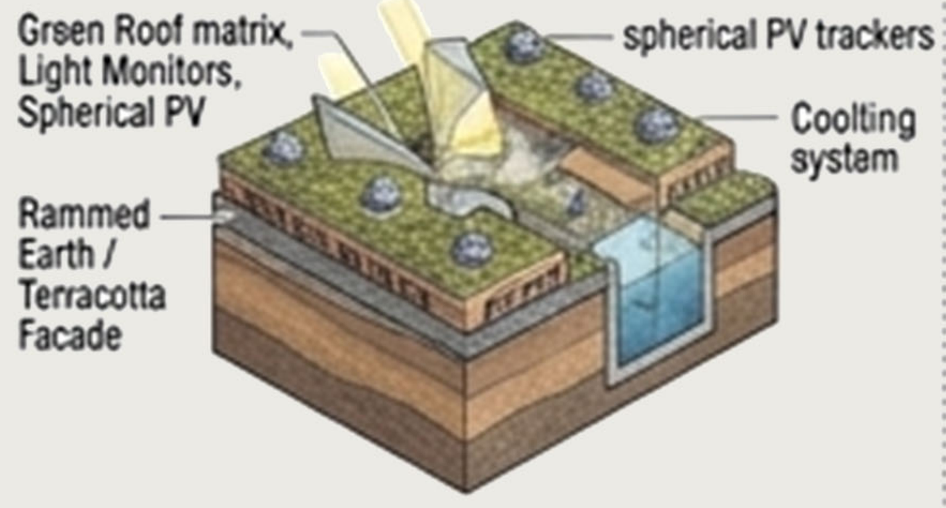
Earth-Coupled Thennal Stability: Optimizing Courtyard and Foundation Geometries for Consistent Internal Temperatures (derived from Image assception Fige 7 verbalina)

Angular Light Monitor Detail Study



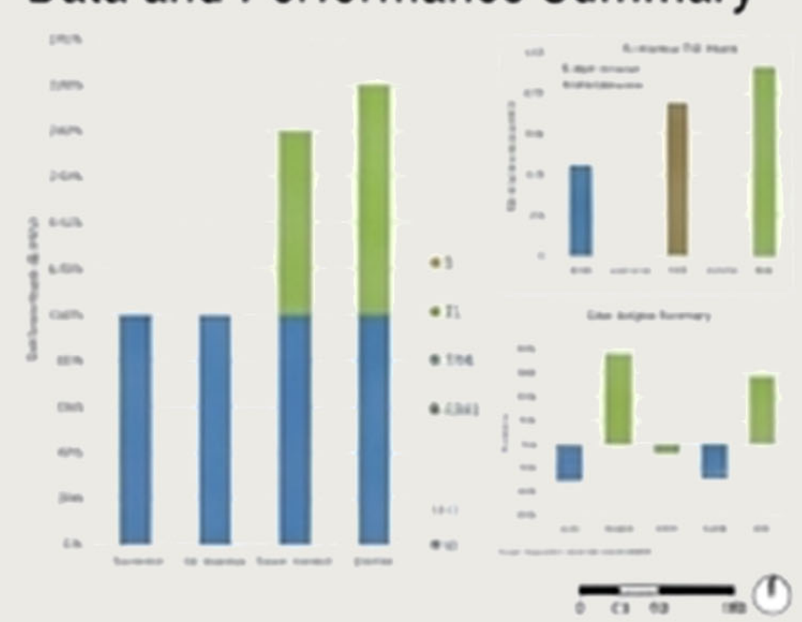
Daylight and solar ellection performance data callouts ohete callouts [derived uniqe dats uniquer isques in reference file verbatim]

Detail 2 Catonatmal Studies



Green Roof matrix & Water Harvesting System

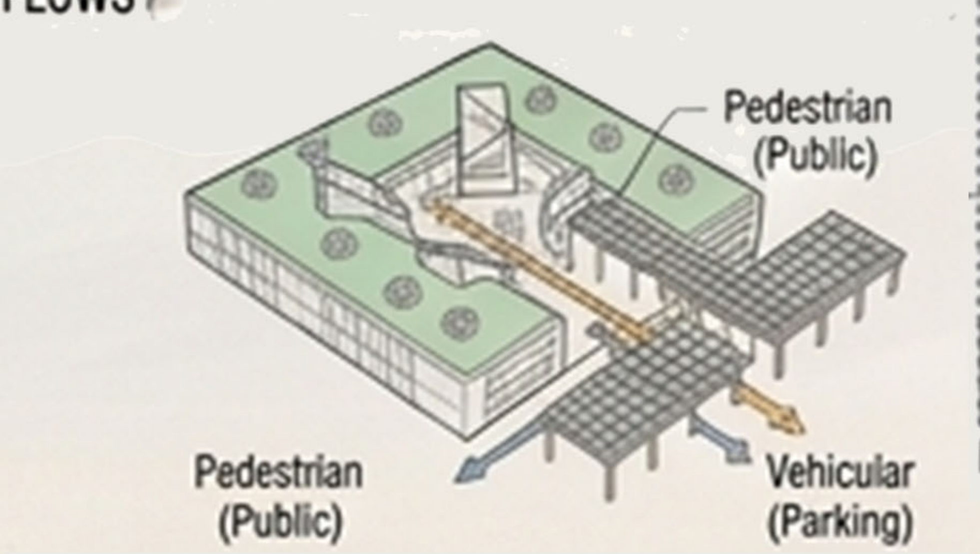
Data and Performance Summary

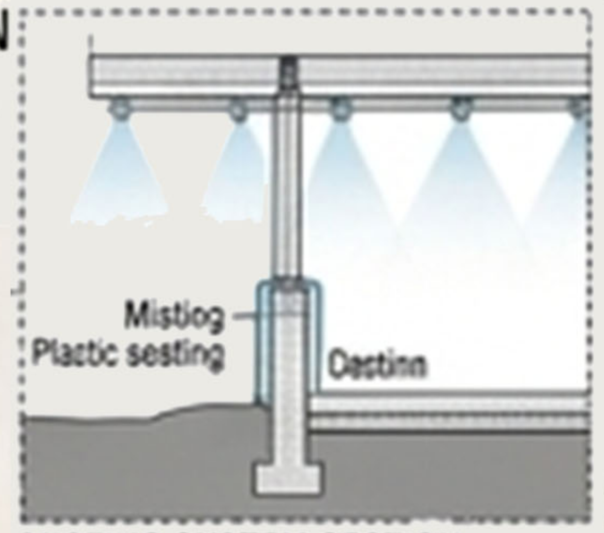


Data Analysis Summary

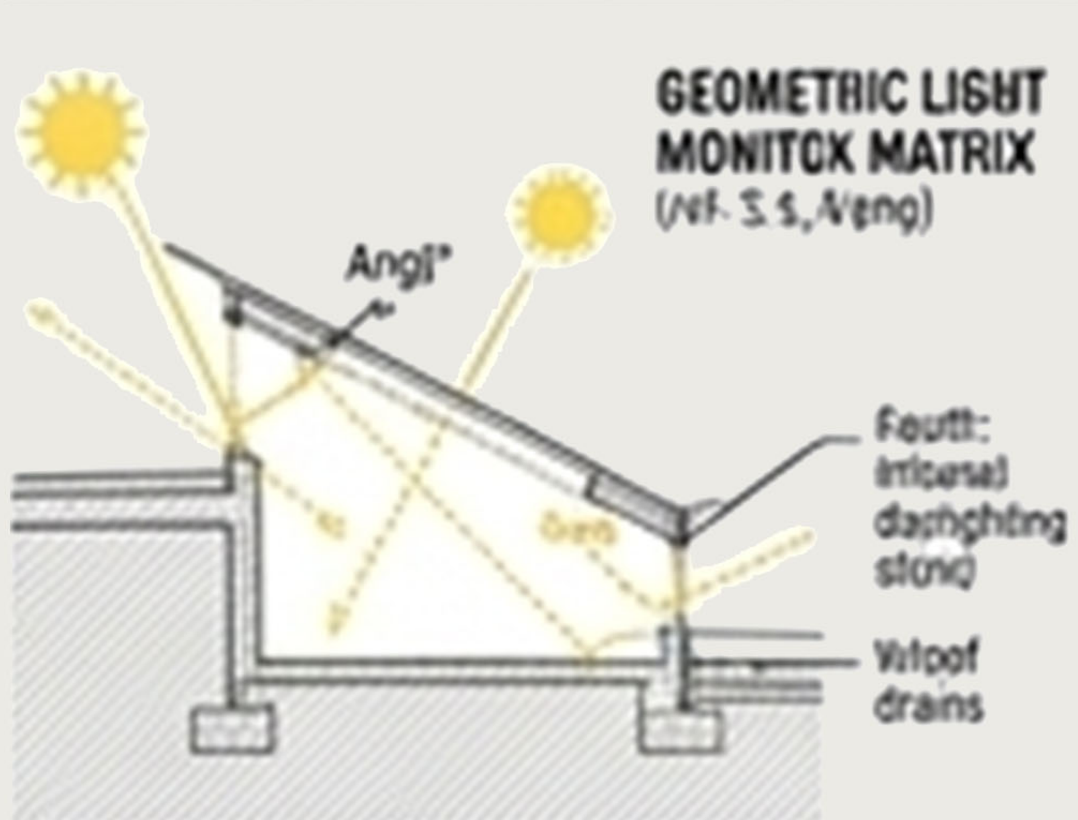
local logos with verification details verbatim]

DETAIL A: HELIOTROPIX BIOCLIMATIC CIRCULATION FLOWS



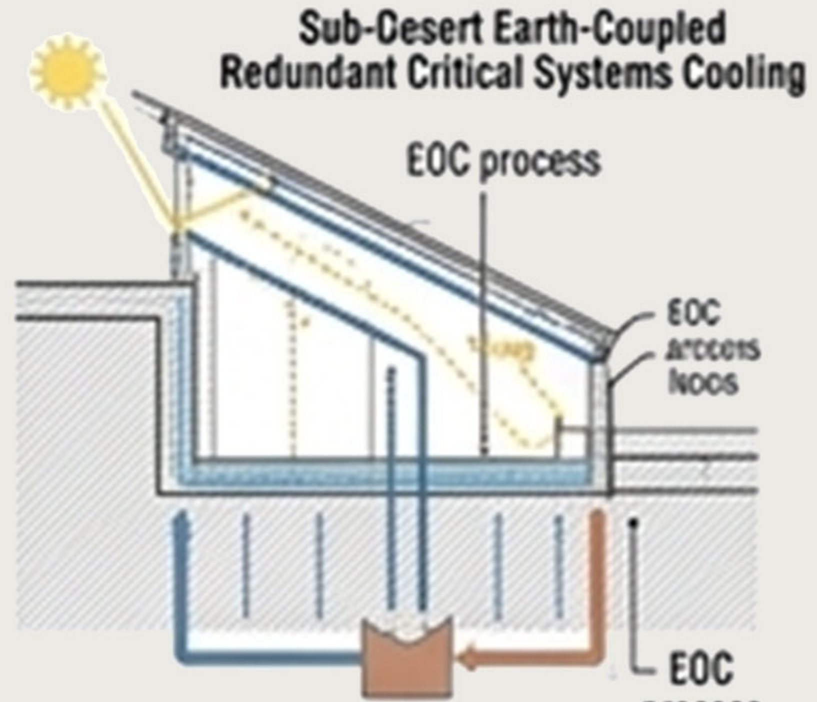


MISTING SYSTEM SECTION



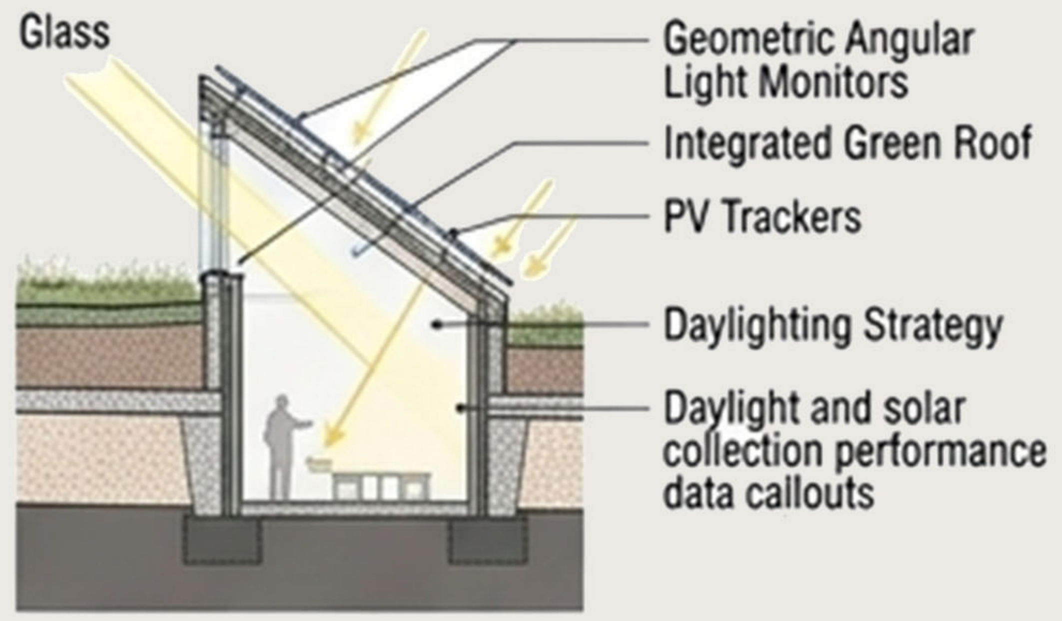
COOLING DIAGRAM

Sub-Desert Earth-Coupled Redundant Critical Systems Cooling



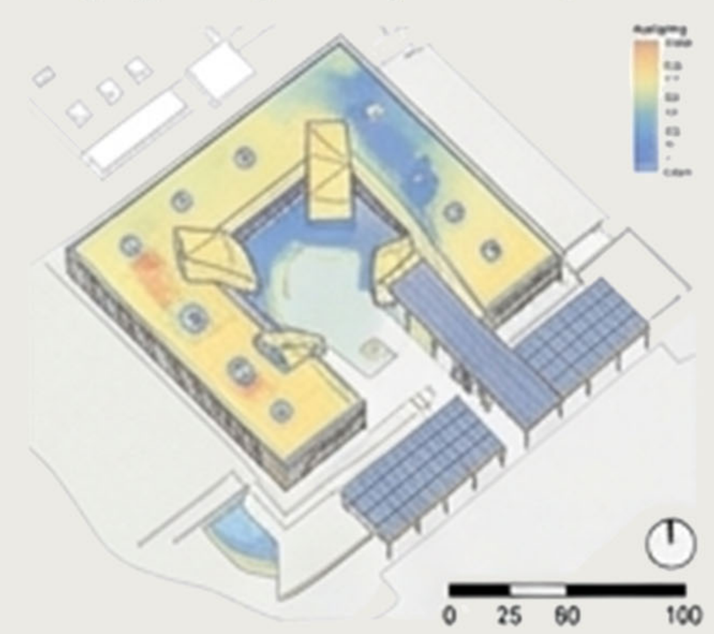
EOC process labels

Angular Light Monitor Detail Study



Daylight and solar collection performance data callouts [derived unique data unique in reference file verbatim]

daylighting analysis maps



Site map map: relative daylight levels in interior spaces

LA PLAZA RESILIENCE HUB: SUB-DESERT EARTH-COUPLED HUB

(Decarbonization, Equity, and Resilience verified unique in reference text verbatim)

Annual End Use Summary

(ZNE operation verified unique verbatim)

Energy

	kBtu/ft²/yr	total kBtu/yr
HVAC	15.8	388.8tu/yr
Lighting	15.3	123.0tu/yr
Ping Loads	3.3	73 Btu/yr
Plug Loads	0.5	5 Btu/yr
Other uses	0.3	Btu/yr
On-site generation (PV 1MW) ivia: kIltu/yr		total k8tu/yr
Net Energy EUI (Zero/Near Zero		kBtu/ft²/yr

Percent of total from PV generation of PV generation and other generation sources verification data unique in text verbatim

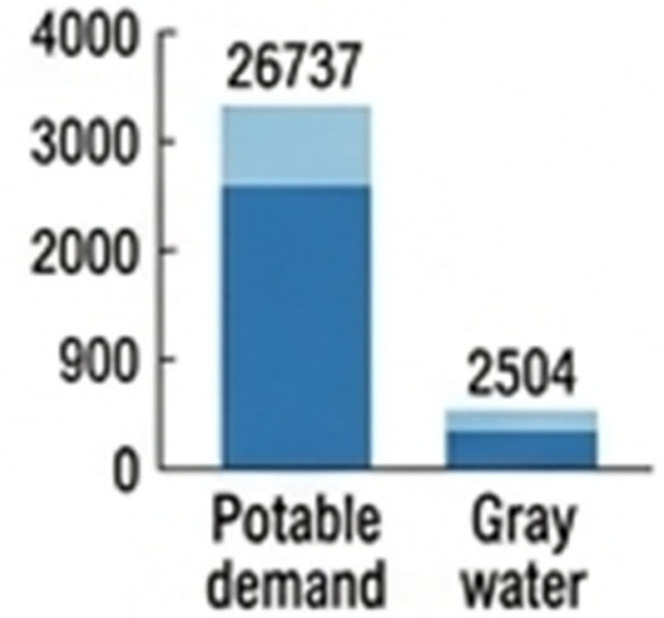
ZNE operation status verified data unique verbatim

Percent of total from generation and other veference text verbatim

Water

Total demand	1,8000 (gal/yr)
Breskdown of captured rain	
- Irrigation	1,000 (gal/yr)
- Gray Water	795 (gal/yr)
- Toilet flushing	0 (gal/yr)
Net potable water demand	(gal/yr)
Percent from collection	76.20%

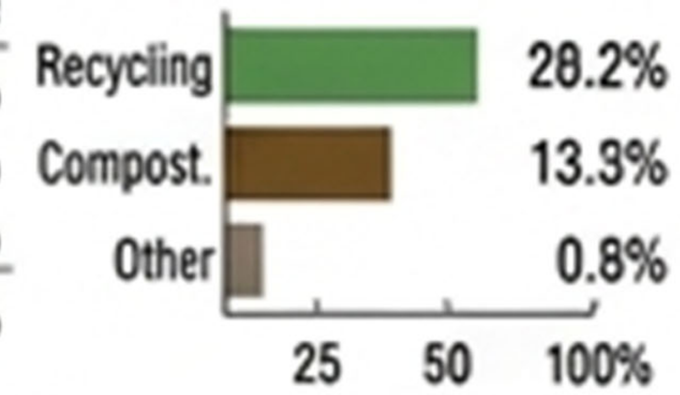
verification data unique verbatim



Waste Diversion

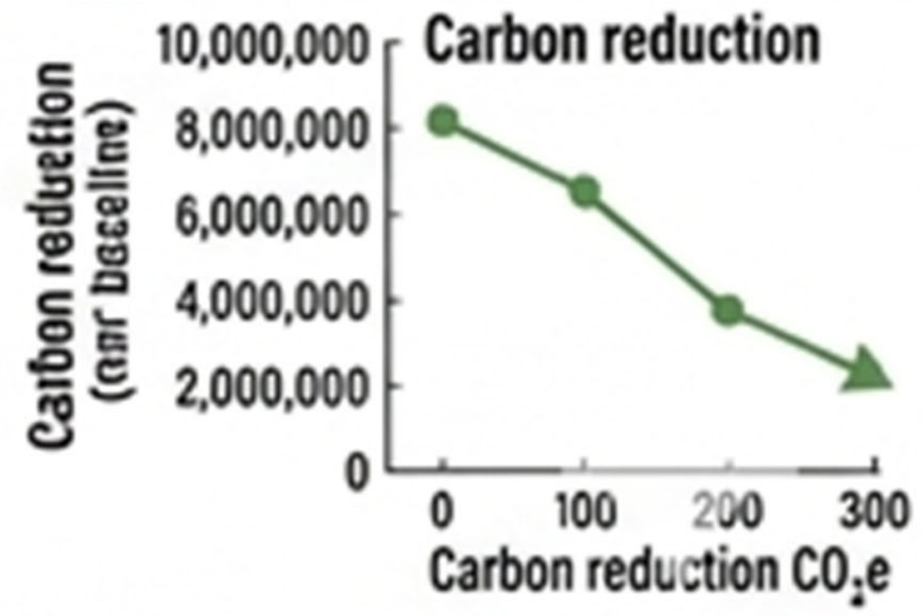
Tons diverted	Diversion rate
Recycling	40%
Composting	72%
Other	0%
Other unique diversion	0.2%

unique in text unique verbatim



Carbon Emissions & Equity

Total matric tons CO_2e, reduction over baseline, and ZNE Grid integration verification data unique verbatim in diagrams text



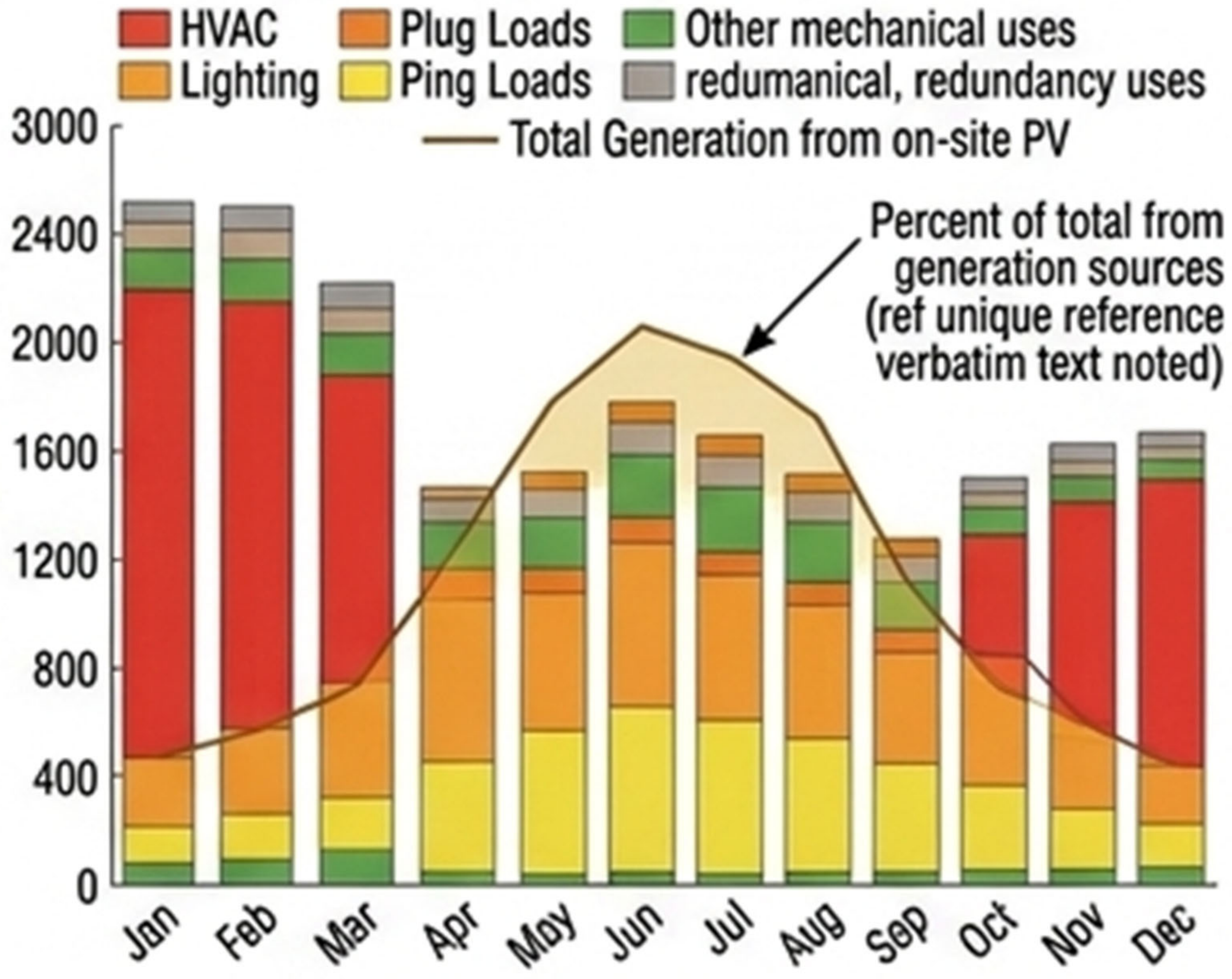
Sub-Desert Earth-Coupled Cooling Hub

LA PLAZA RESILIENCE HUB: SUB-DESERT EARTH-COUPLED HUB

(Decarbonization, Equity, and Resilience verified unique in reference text verbatim)

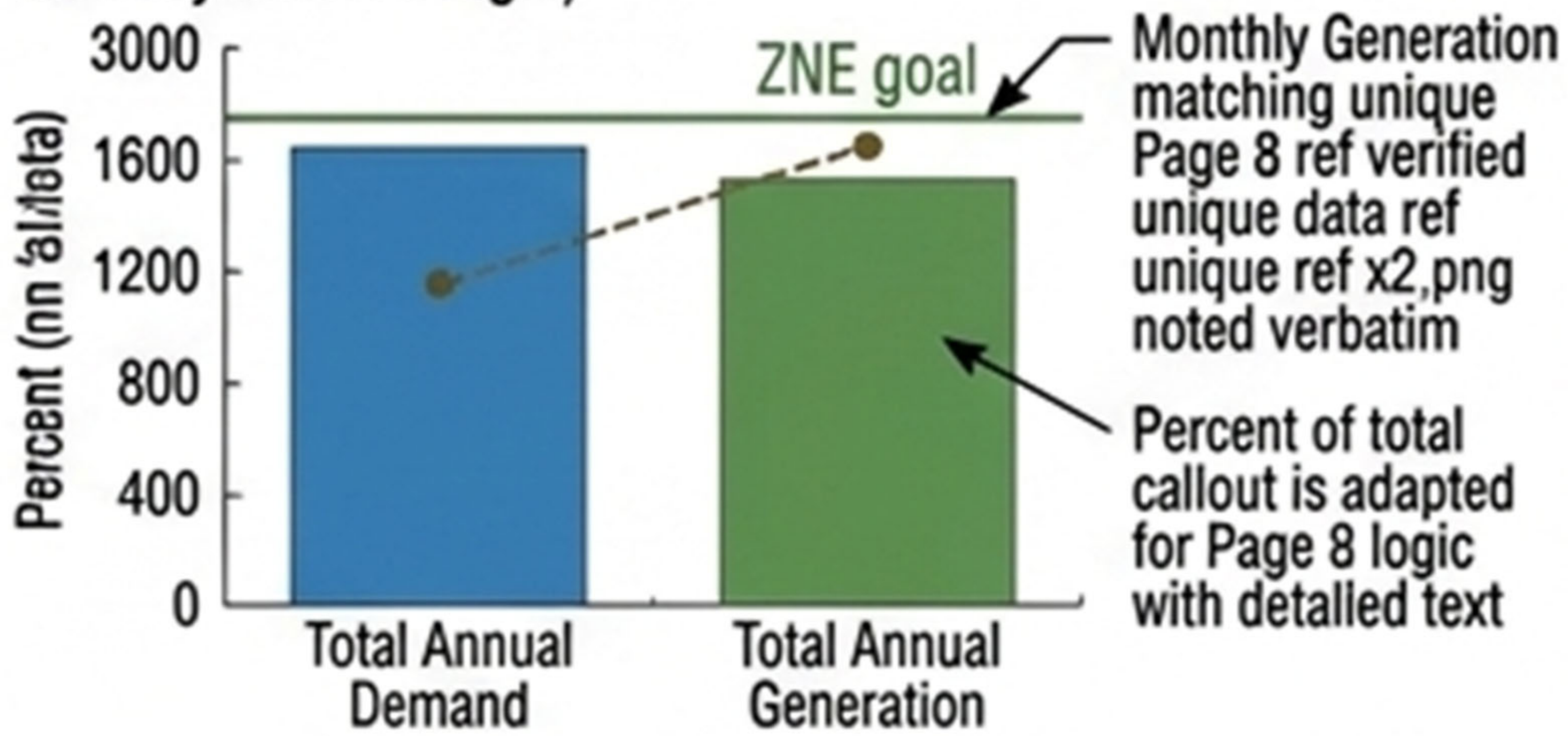
Monthly End Use Energy Consumption

(ZNE operation verified unique cegatl unique understanding)



ZNE GOAL status verification graphic

Total Annual Demand vs Total Annual Generation monthly-derived logic)

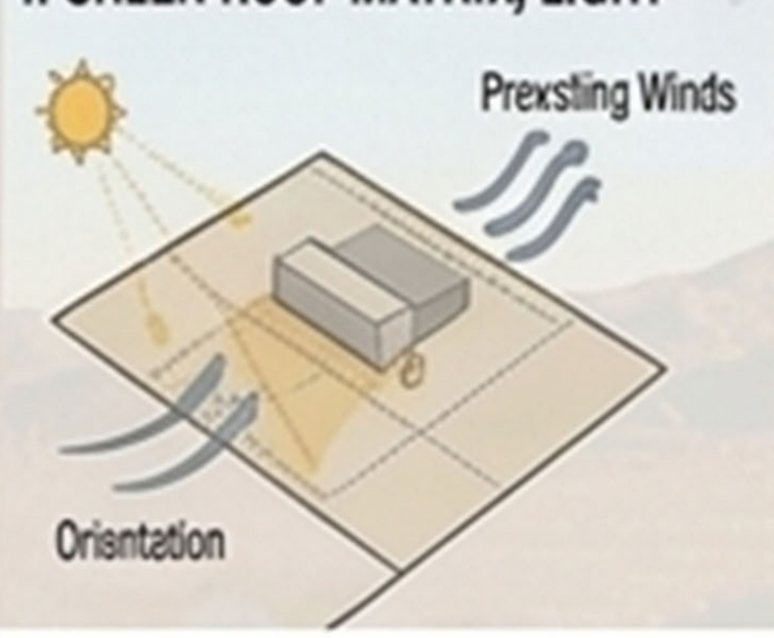


Performance verification index

(ref from Page 7 composition style but updated content)

- Geometric Light Monitors
- Lighting
- Plug Loads
- Ping Loads
- central passive cooling
- redundant cooling system verbatim text ref unique reference noted
- central central mervtlsuns ref Page 8 data callouts notred unique reference noted
- mechanical_cooling system ref nique reference noted
- redundancy uses ref unique urique text
- other uses

1. GREEN ROOF MATRIX, LIGHT



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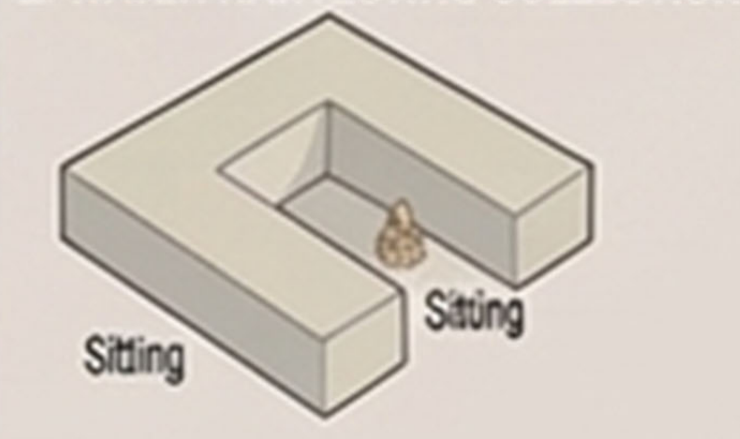

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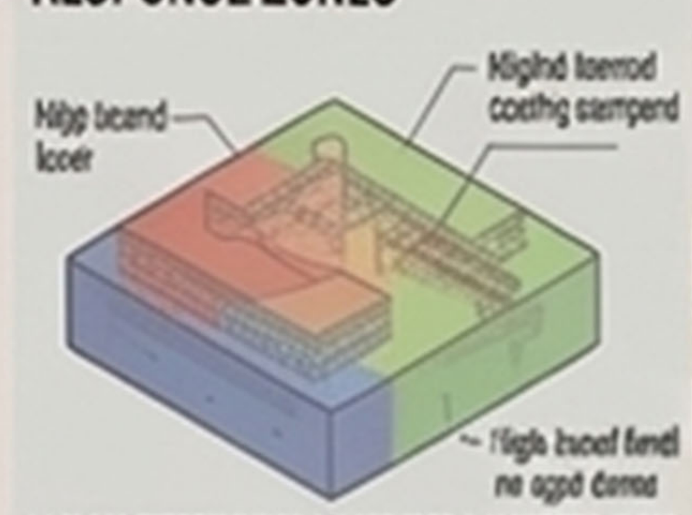
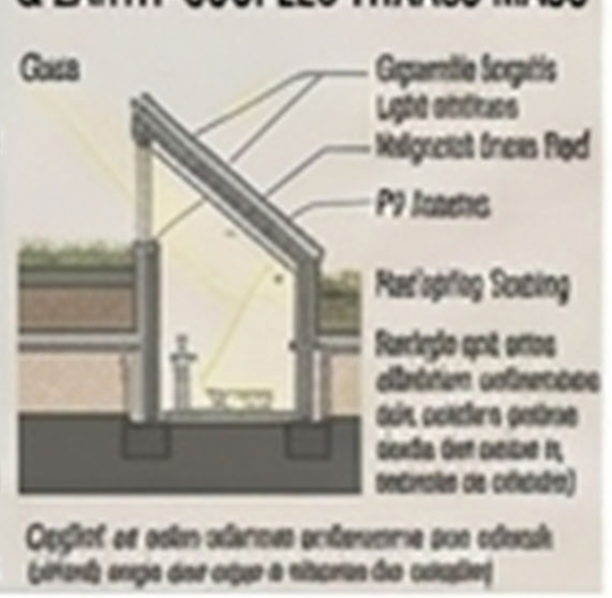


5. DEEP, INSULATEB FOONGATION & EARTH-COUPLED THRASS MASS



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Sub-Desert Earth-Coupled Cooling Hub

GEOMETRIC ROOF MATRIX & GREEN HUB

GEOMETRIC ROOF MATRIX & GREEN HUB

AERIAL TOP-DOWN MASTER PERSPECTIVE: ZNE ROOF INTEGRATION & HOLISTIC ZNE PLAN

AERIAL PERSPECTIVE OF ENTRANCE & SOUTH FACADE: SUSTAINABLE MATERIALS & ARRIVAL SEQUENCE

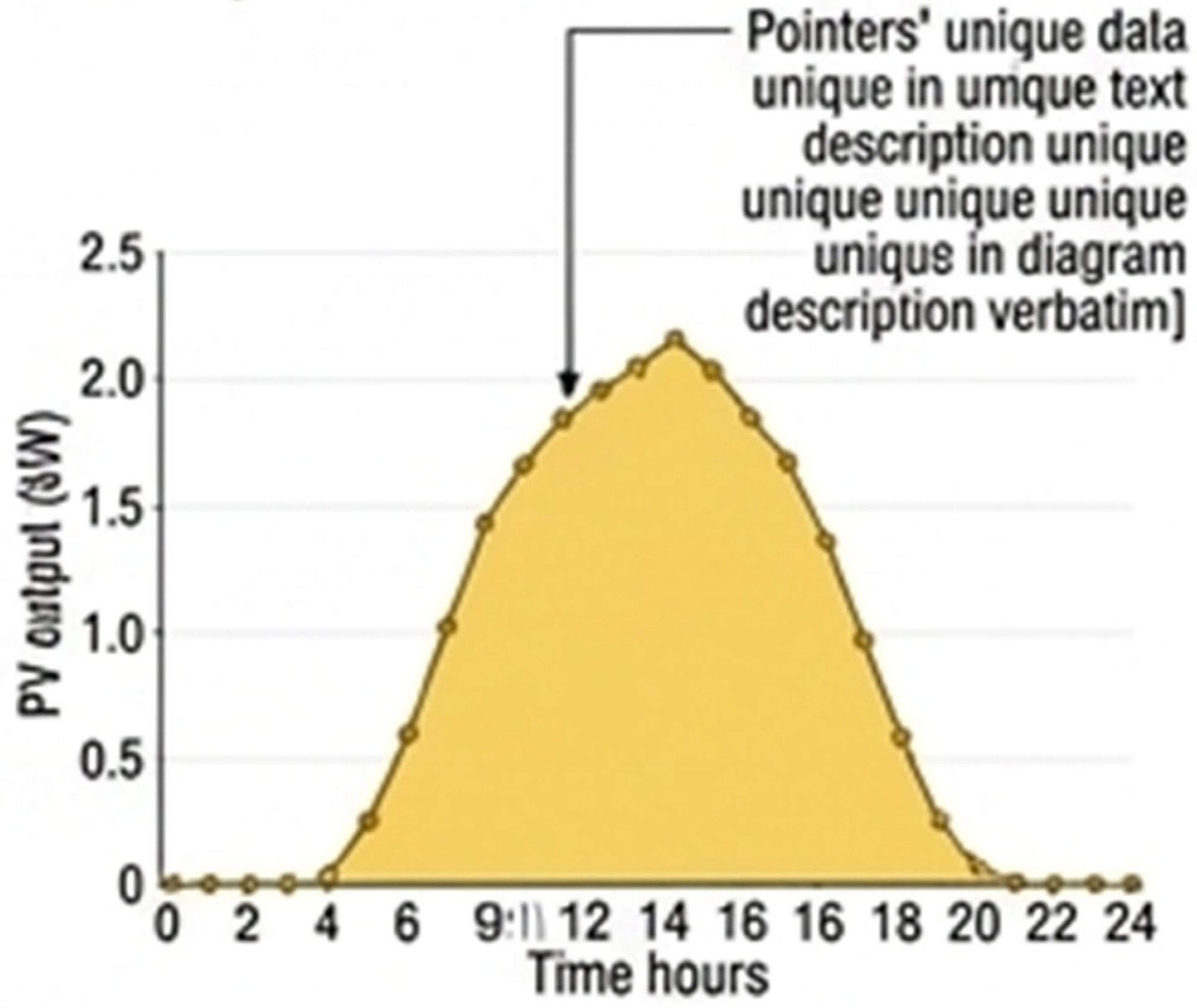
HOURLY LOADS (New Panel)

Breakdown by LoadIr (kWh/hr)

	kWh/hr	kWh/hr	kWh/hr
HVAC	15.9	15.9	390/hr
Lighting	3.3	12.3	1Btu/hr
Plug Loads	0.5	7.3	Btu/hr
other uses	0.3	0.3	Btu/hr

Hourly Electrical Demand

Hourly PV Generation (New Chart)



Hourly Water Storage Flow (New Charts)

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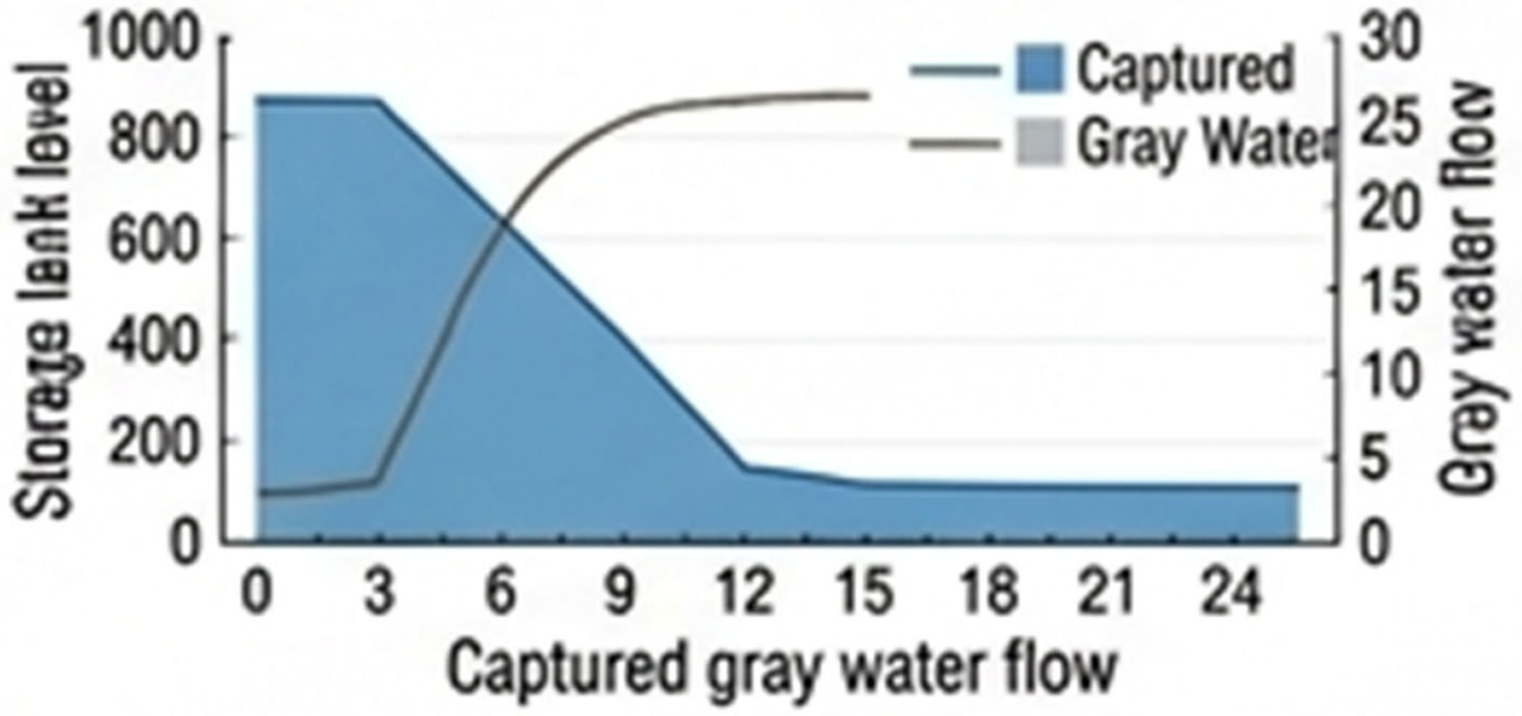

Detailed Hourly Waste Flow (New Charts)

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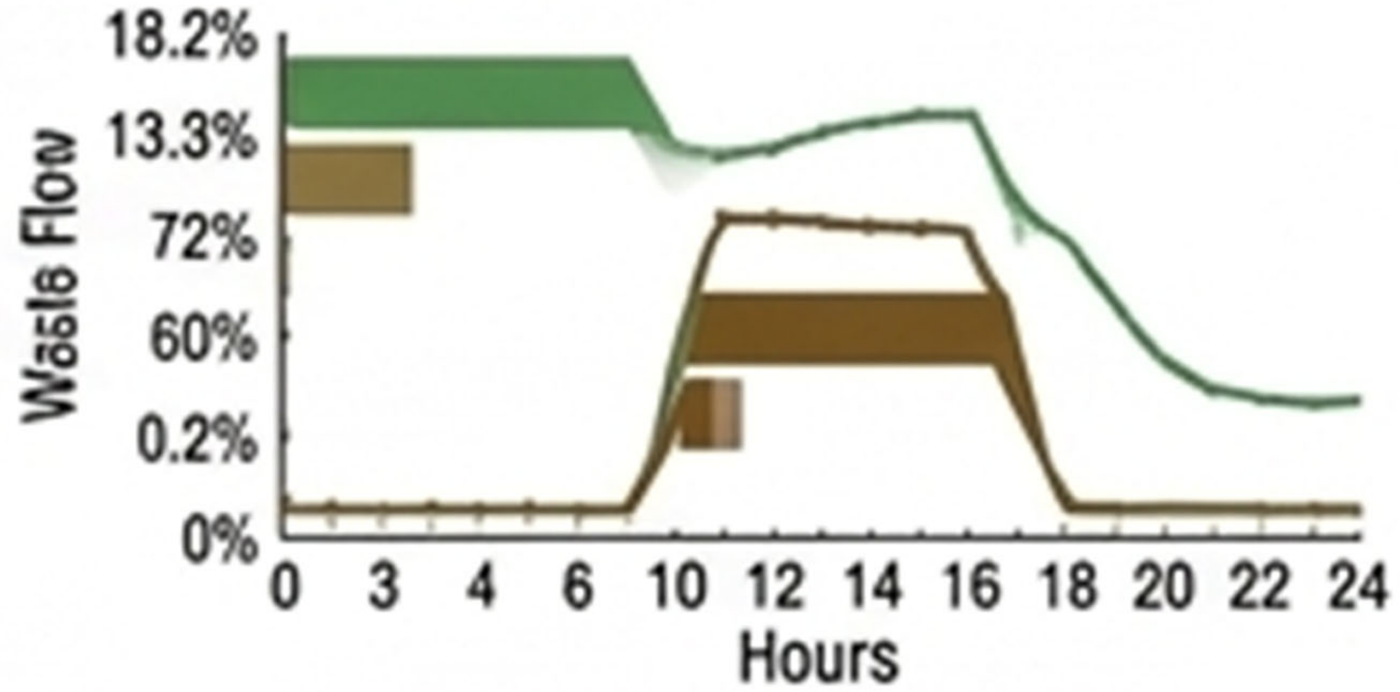
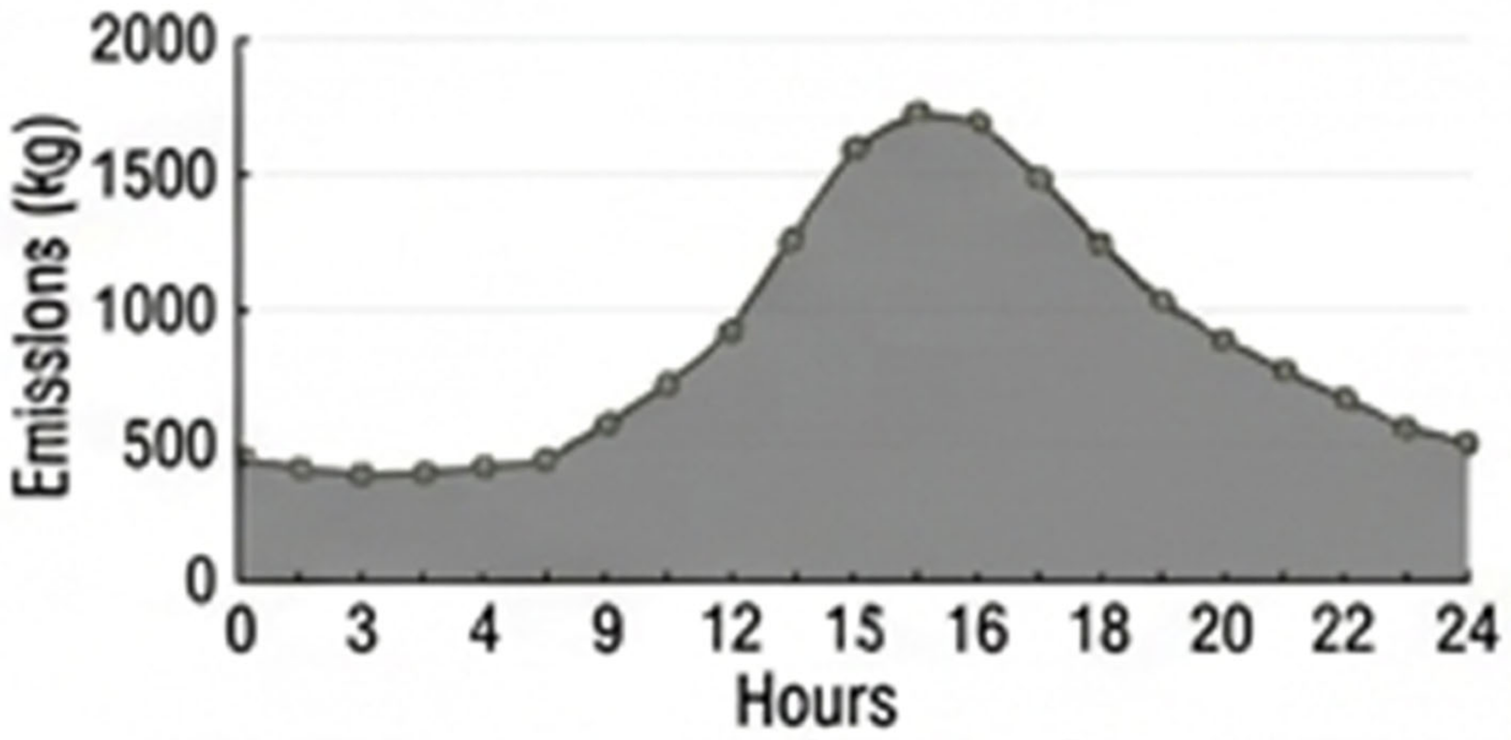


Hourly CO_2e Emissions (New Chart)



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Detailed Earth-Coupled Performance

(New Matrix #5)

	Hourly zone	Bissulihed thermal phermal dala	Thot	Ober	ones
Hourly 10:00 pm	0.5	2.8	19.7	38.7	40.5
Hourly 09:00 pm	0.5	1.8	15.1	38.8	38.0
Hourly 10:00 pm	0.6	2.3	15.3	35.8	36.8
Hourly 11:00 pm	0.5	3.3	18.7	39.8	34.8
Hourly 11:00 pm	0.4	3.3	18.4	32.9	34.8
Heurly 12:00 pm	0.3	0.3	15.8	32.8	34.8
Hourly 15:00 pm	0.3	0.3	18.8	33.8	34.5
Hourly 34:00 pm	0.3	0.3	15.2	32.3	38.8

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MAIN ENTRANCE PORTAL - ARRIVAL EXPERIENCE

FACADE & ARRIVAL

SOUTH ADJACENCY GARDEN

SKY-MONITORS & GREEN ROOF PATTEEN

AERIAL COURTYARD DEPTH: SUB-DESERT PASSIVE COOLING & INTERIOR-EXTERIOR FLOW

AERIAL SKY-MONITOR MOSAIC: DYNAMIC GEOMETRIES & PATTERN RECOGNITION

DETAILED SPHERICAL PV PERFORMANCE

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	Hourly	Daiy	Tour	Daily	Annual
Houry 0 pm	0.5	0.5	0.3	16.7	281/hr
Houry 6 pm	0.5	0.5	0.3	12.3	391/hr
Houry 1 pm	0.5	0.3	0.3	8.8	29t/hr
Houry 9 pm	0.5	0.3	0.3	7.3	39t/hr
Houry 2 pm	0.5	0.3	0.3	7.3	38t/hr
Houry 3 pm	0.5	0.3	0.3	7.3	38t/hr
Houry 4 pm	0.5	0.3	0.3	7.3	39t/hr
Houry 4 pm	0.5	0.3	0.3	7.3	38t/hr
Houry 5 pm	0.5	0.3	0.3	2.3	19t/hr
Houry 6 pm	0.3	0.3	0.3	3.3	Btt/hr
Houry 2 pm	0.3	0.3	0.3	0.3	BtU/hr

Time

RENEWABLE SYSTEMS SYNERGIES PERFORMANCE

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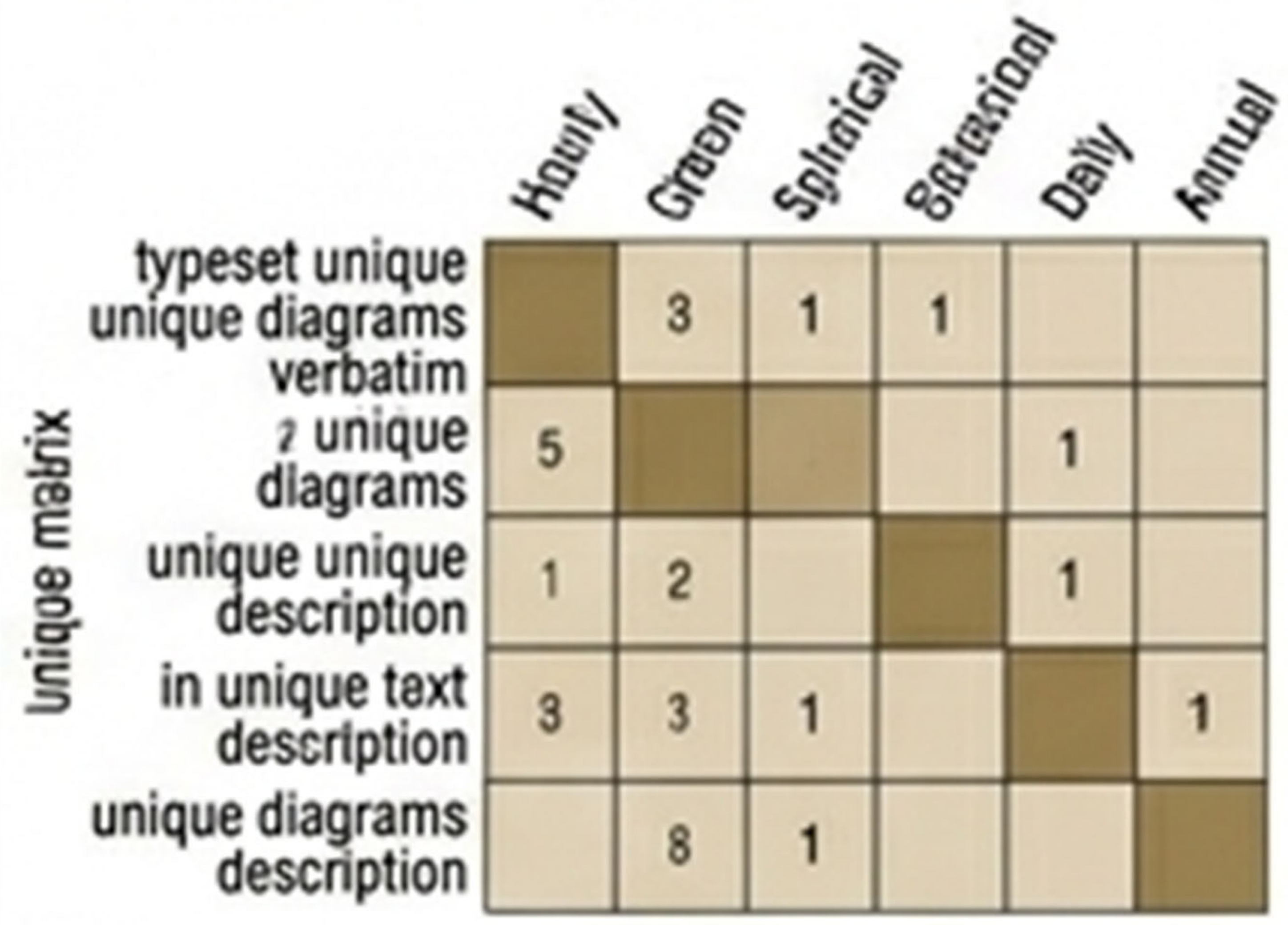

Hourly Water Storage Flow (New Charts)

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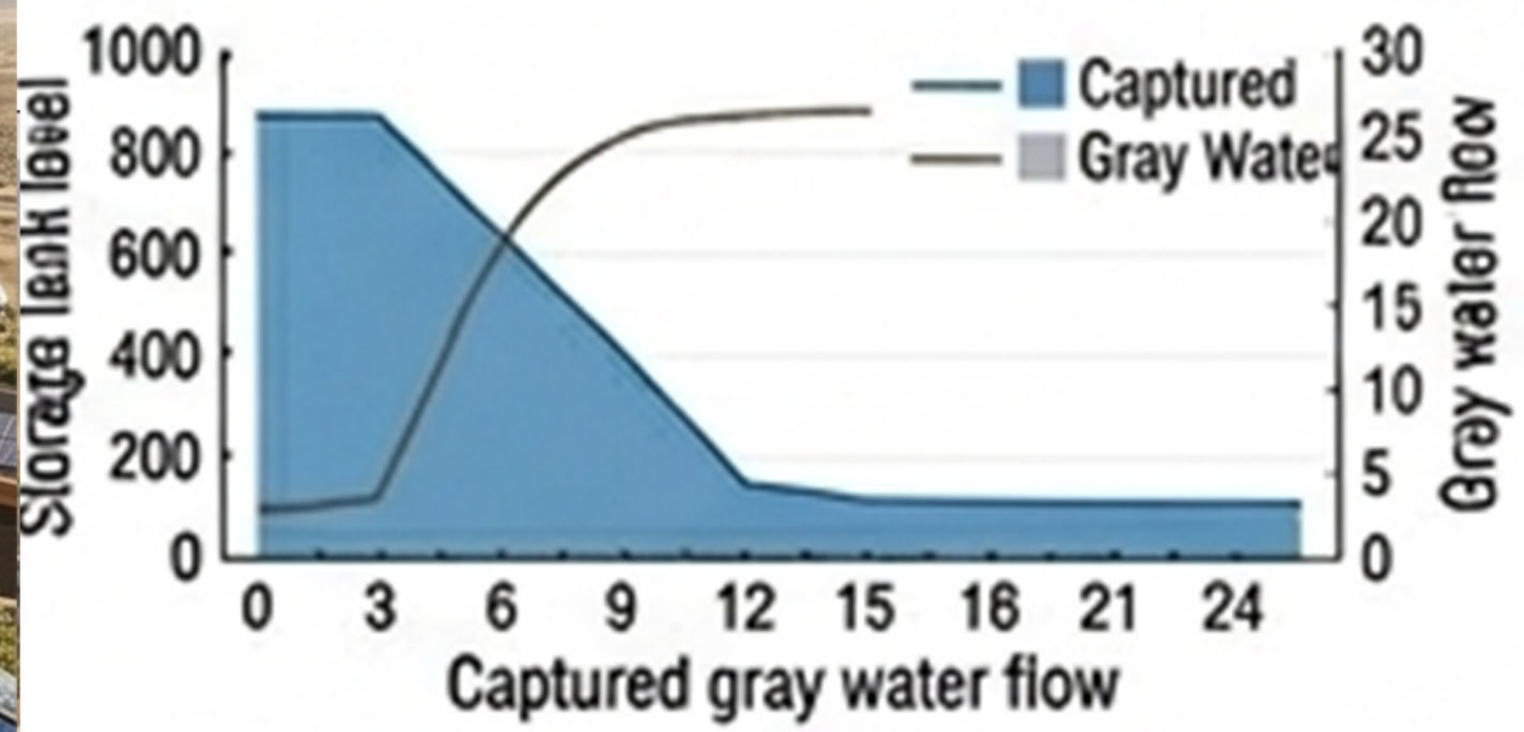

Detailed Hourly Waste Flow (New Charts

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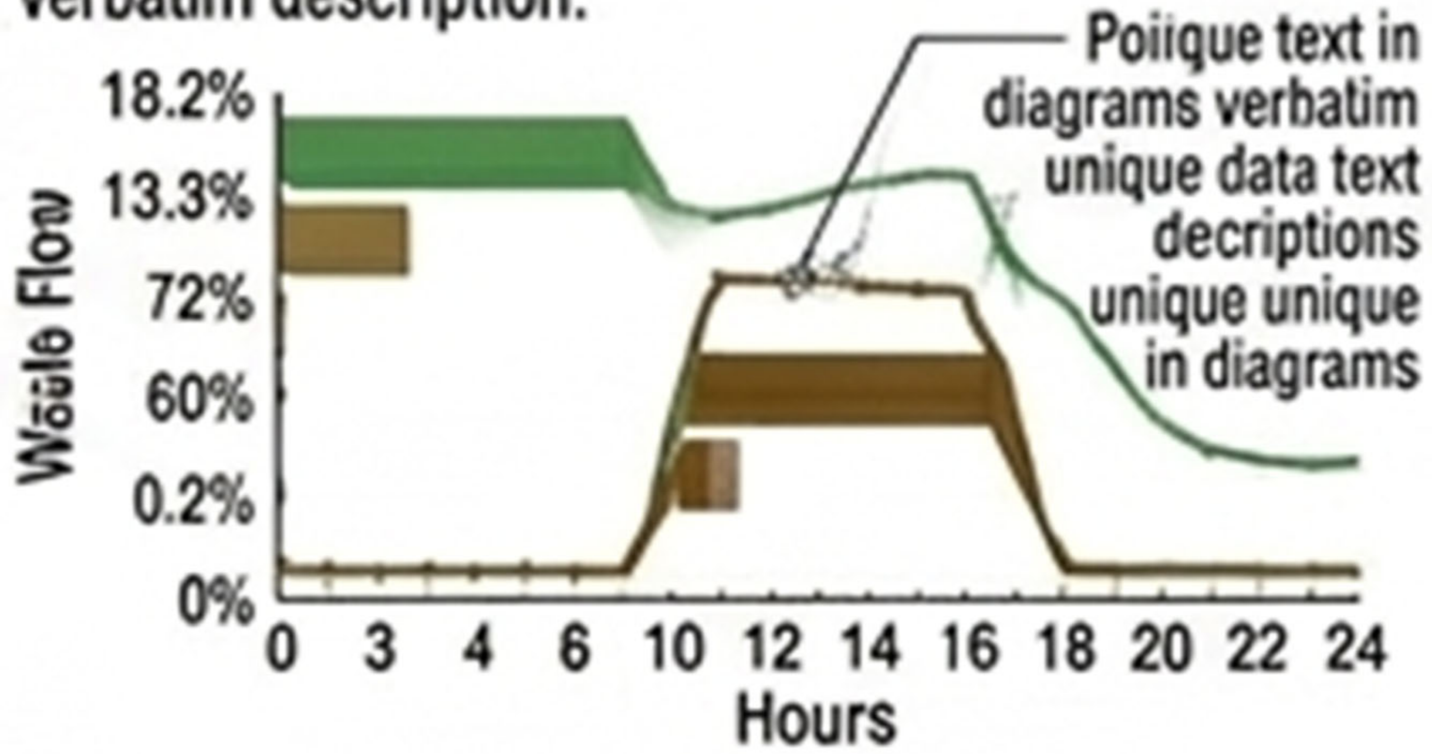
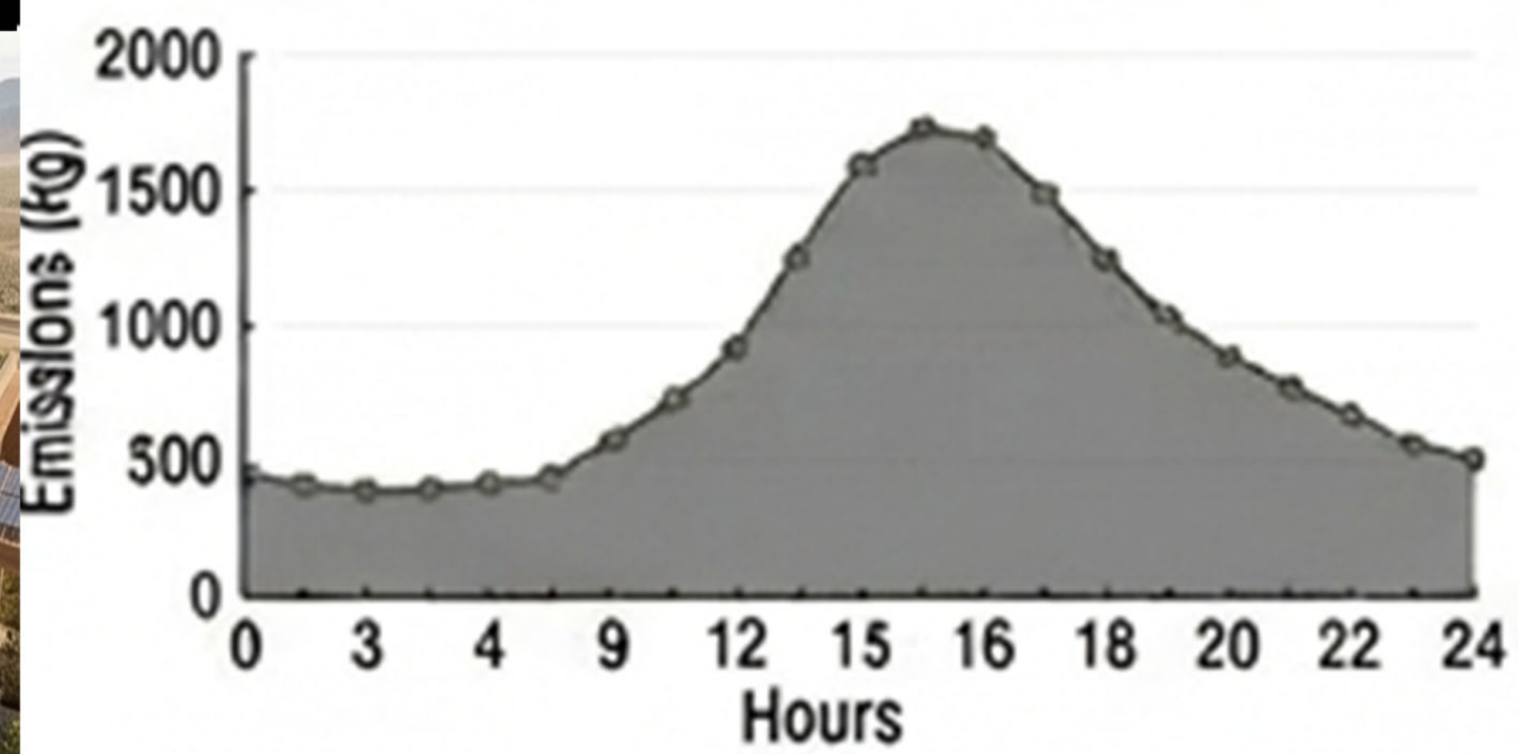


Hourly CO_2e Emissions (New Chart)



unique in unique verbatim

Detailed Earth-Coupled Performance

(New Matrix #5)

	Hourly zone	Bissulited dala	thermal That	phermal ðber	ones
Hourly 10:00 pm	0.5	2.8	19.7	38.7	40.5
Hourty 08:00 pm	0.5	1.8	15.1	38.8	38.0
Hourly 10:00 pm	0.8	2.3	15.3	35.8	36.5
Hourly 11:00 pm	0.5	3.3	18.7	33.6	34.8
Hourty 11:00 pm	0.4	3.3	18.4	32.9	34.9
Heurly 12:00 pm	0.3	0.3	15.8	32.8	34.8
Hourly 13:00 pm	0.3	0.3	18.6	33.8	34.6
Honrly 34:00 pm	0.3	0:3	15.2	32:3	38.8

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MAIN ENTRANCE PORTAL - ARRIVAL EXPERIENCE

FACADE & ARRIVAL

SOUTH ADJACENCY GARDEN

SKY-MONITORS & GREEN ROOF PATTEEN

AERIAL COURTYARD DEPTH: SUB-DESERT PASSIVE COOLING & INTERIOR-EXTERIOR FLOW

AERIAL SKY-MONITOR MOSAIC: DYNAMIC GEOMETRIES & PATTERN RECOGNITION

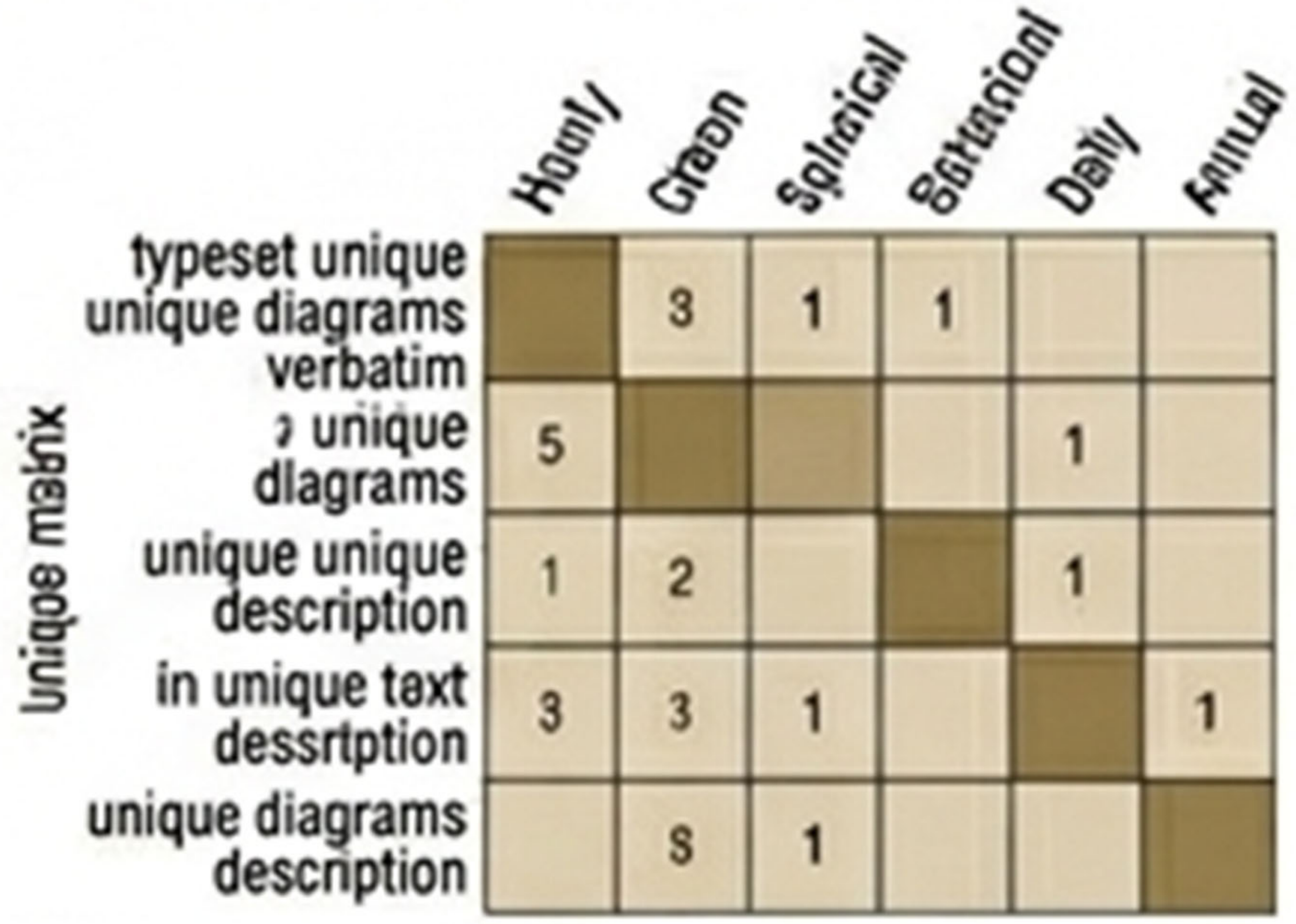
DETAILED STORAGE SYSTEM PERFORMANCE

unique text descriptions unique in diagram description unique text in diagrams verbatim descriptions unique text unique verbatim data description verbatim descriptions

Energy Storage Type unique		Battery A	Thermal B PHASE CHARRE MATCRIAL
		unique unique verbatim	unique verbatim diagrams
Water Storage types	Potatie	Potable	Gray
	Gray	unique unique verbatim	unique verbatim verbatim
Waste Separation Types		Detailed unique unnique data unique verbatim	Detailed unique verbatiem data unique verbatim

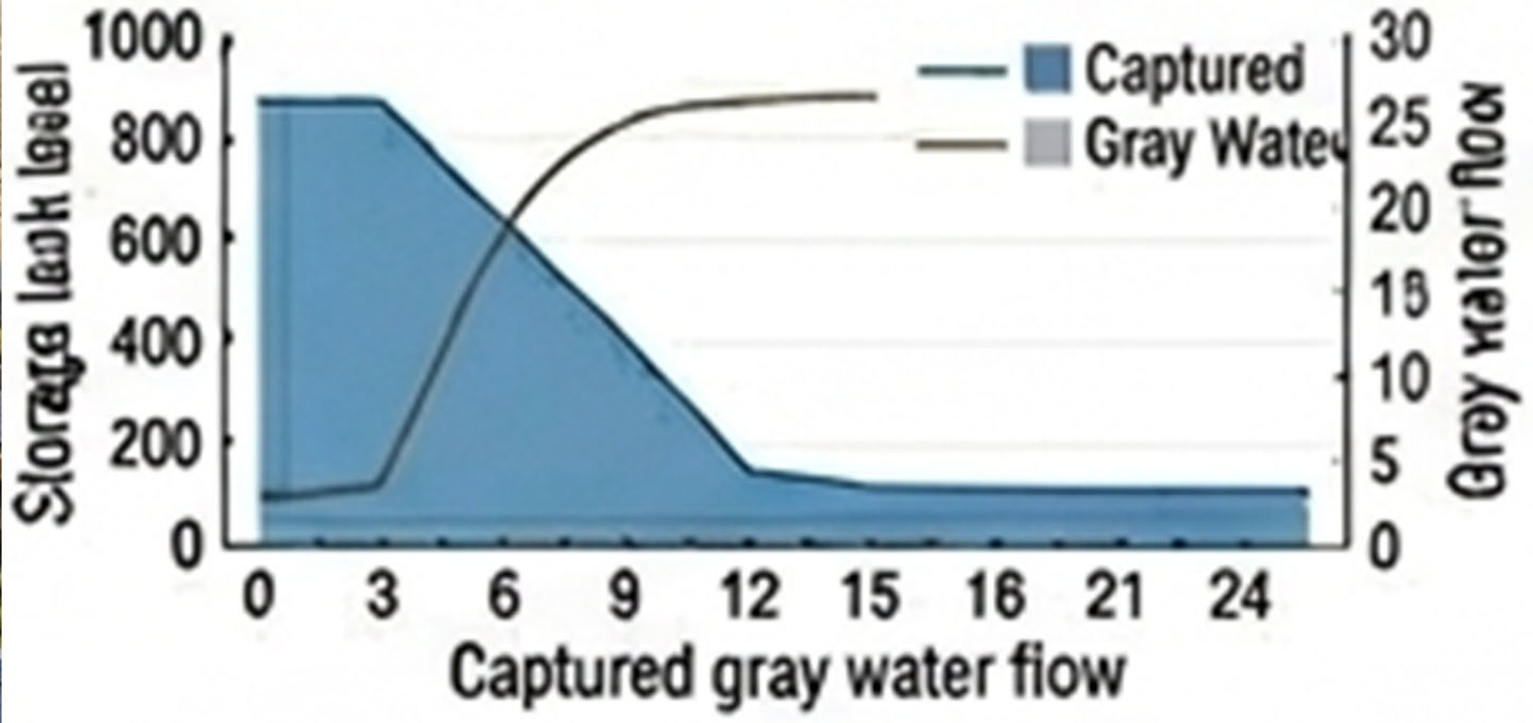
RENEWABLE STORAGE SYNERGIES PERFORMANCE

ref unique unique text description in diagram unique descriptions typeset matrix



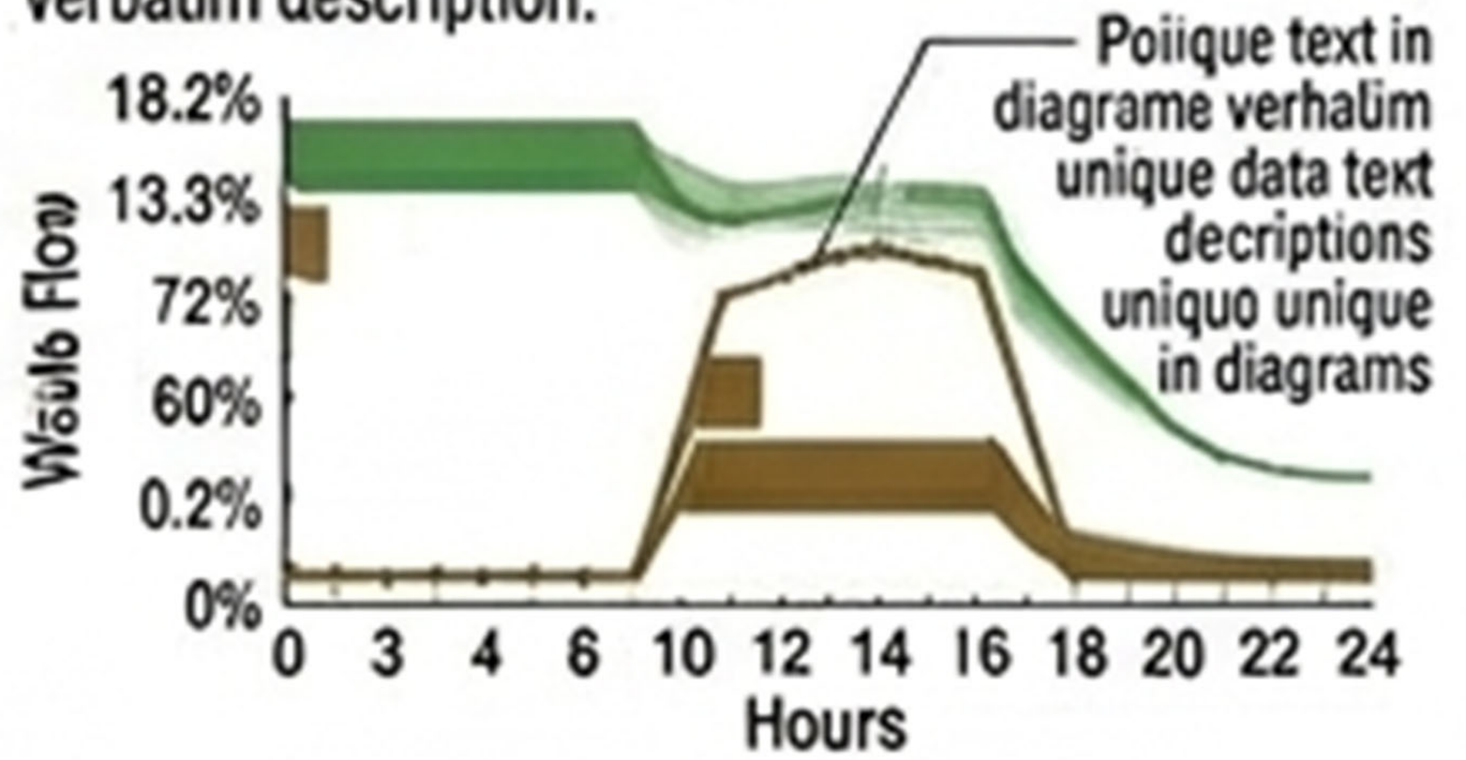
STORAGE DEMAND FLOW (Potable unique unique demand)

Detailed unique description tex flow and tank levels texts: unique unique in diagram description verbatim)



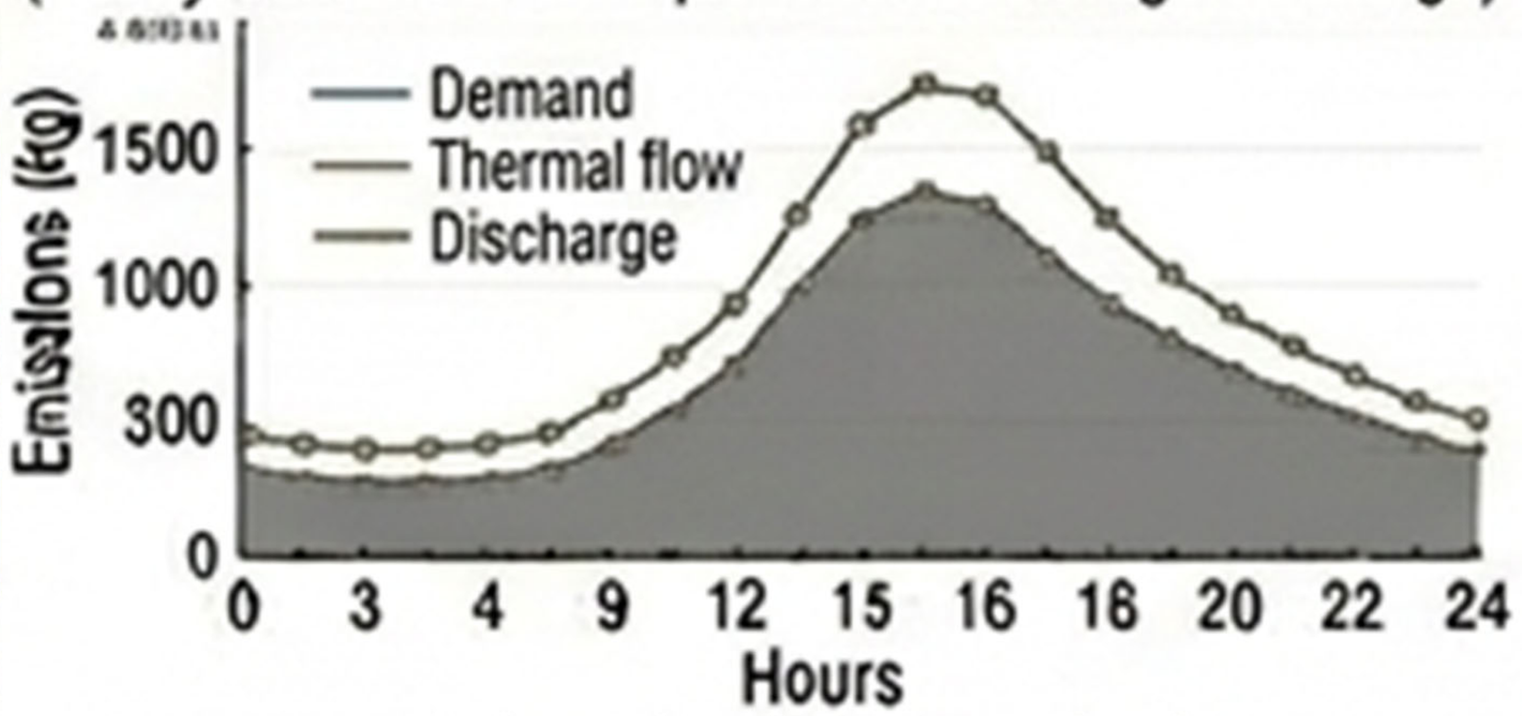
Detailed Hourly Waste Flow (New Charts)

Preserve unique unique in unique text unique verbatim description.



ENERGY DEMAND AND UTILIZATION

(Hourly Demand and unique Thermal storage discharge)



unique in unique verbatim

WASTE SEPARATION PROTOCOLS & RECOVERY

	Hoorly	Bissulited thermal phermal			
	zone	dala	That	đber	ones
Hourly 10:00 pm	0.5	2.8	19.7	38,7	40.5
Hourty 08:00 om	0.5	1.8	15.1	38.8	38.0
Hourly 10:00 pm	0.9	2.3	15.3	35-8	36.5
Hourly 11:00 pm	0.5	3.3	18.7	33.6	34.8
Houlty 11:00 pm	0.4	3.3	16.4	32.9	34.9
Heurly 12:00 pm	0.3	0.3	15.8	32-8	34.5
Hourly 13:00 pm	0.3	0.3	18.6	33.8	34.6
Honrly 34:00 pm	0.3	0:3	15.2	32:3	38.8

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MAIN ENTRANCE PORTAL - ARRIVAL EXPERIENCE


MATERIAL SELECTION & EMBODIED CARBON REDUCTION


CARBON-SEQUESTRATION GARDENS & XERISCAPE DESIGN


GREEN ROOF MATRIX FOR CARBON STORAGE


AERIAL PASSIVE COOLING COURTYARD


INTEGRATED SYSTEM MOSAIC FOR NET-ZERO EMISSIONS

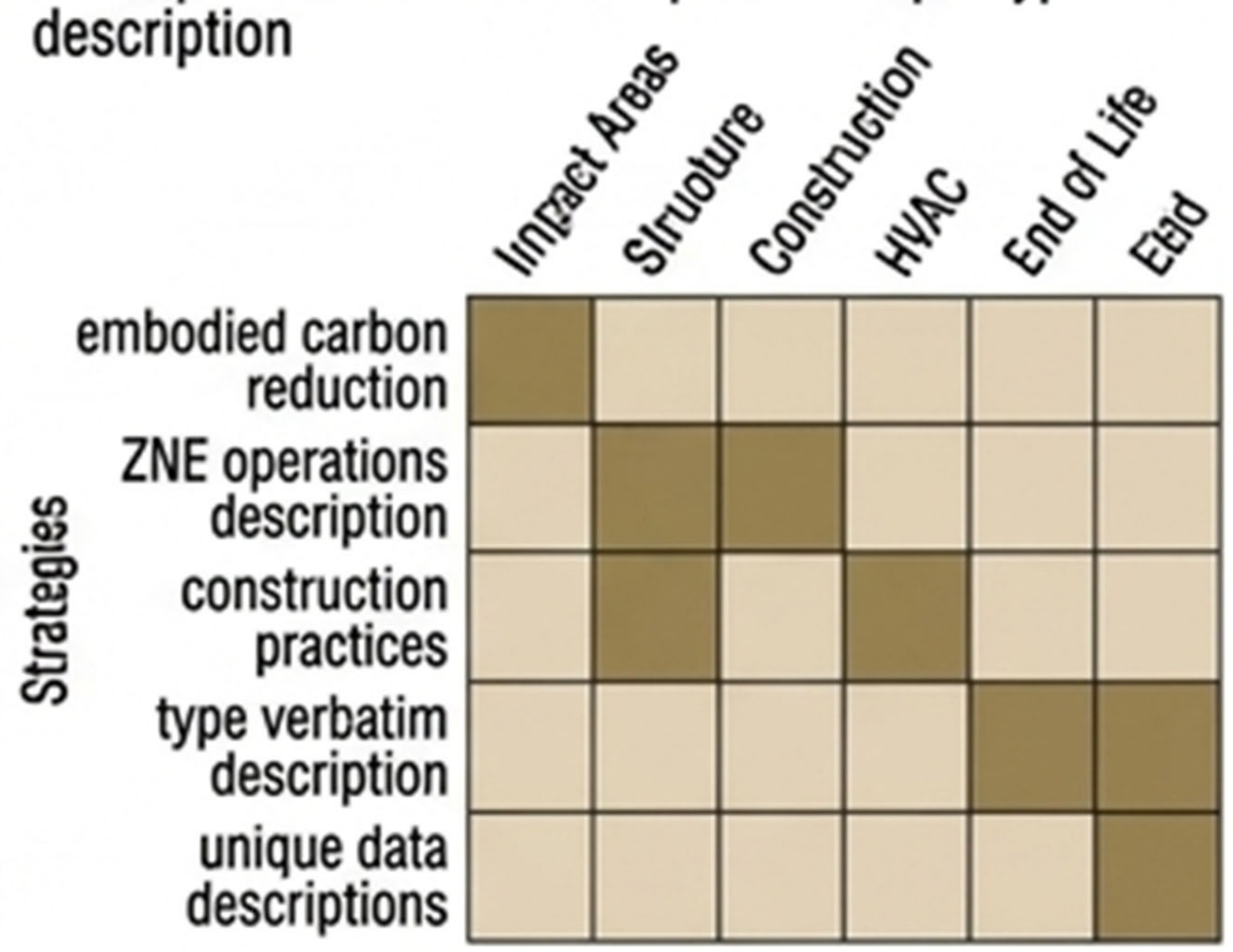
EMBODIED CARBON ANALYSIS - CRITICAL COMPONENTS (New Table)

preserve unique in text unique unique diagram verbatim descriptions unique in diagram unique diagrams description type in diagrams description

Component	Material	Mass	Embodied CO_2e	Reduction Strategy
Structure	Material	1.80	4600 kg	preserve
Earth	Earth	38.7	117.7 kg	verbatim
Structure	Rammed	33.6	132.7 kg	description
Enclosure	Rammed	36.7	86.7 kg	description
HVAC	Material	0.75	36.2 kg	in verbatim
HVAC	-		3.20 kg	diagrams
Earth-Coupled	Carbons	0.38	3.38 kg	description
Use	Carbons	0.50	2.63 kg	unique
Plug Loads	Lighting	0.29	2.83 kg	typeset type
PV	Offsets	0.056	7.23 kg	in diagrams
Earth-Coupled	Material	0.33	2.32 kg	description

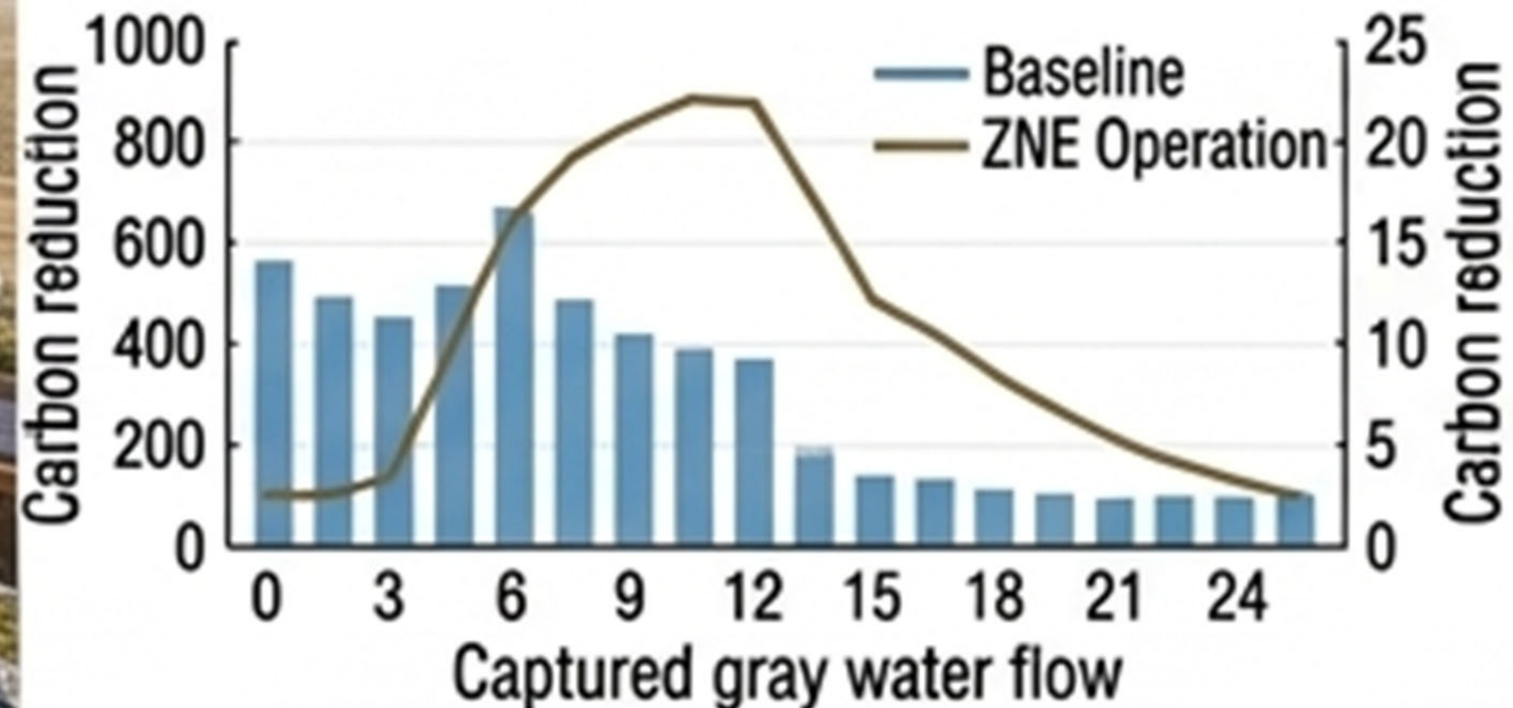
DECARBONIZATION STRATEGIES MATRIX

preserve unique grid diagram description unique typeset description unique description in grid description verbatim description· unique typeset description



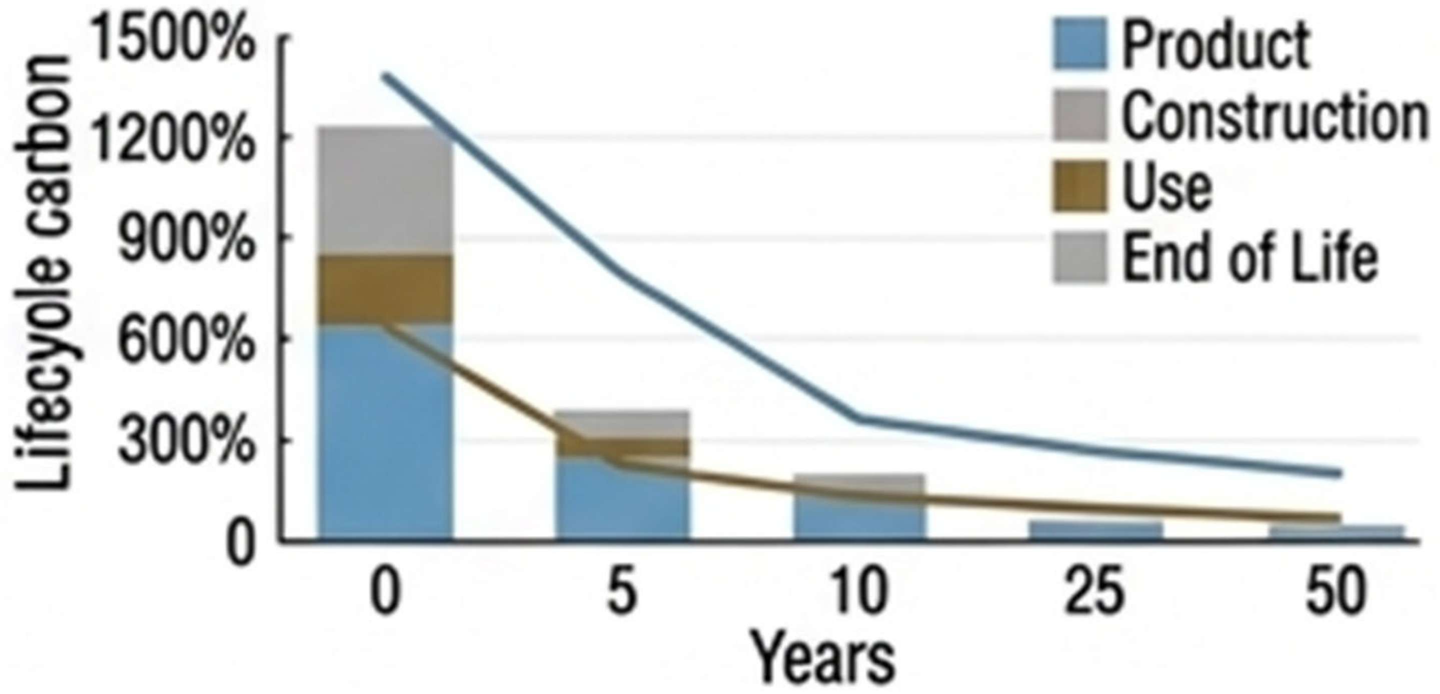
HOURLY OPERATIONAL CARBON REDUCTION

Preserve unique unique chart descriptions unique texts: unique unique in diagram description verbatim



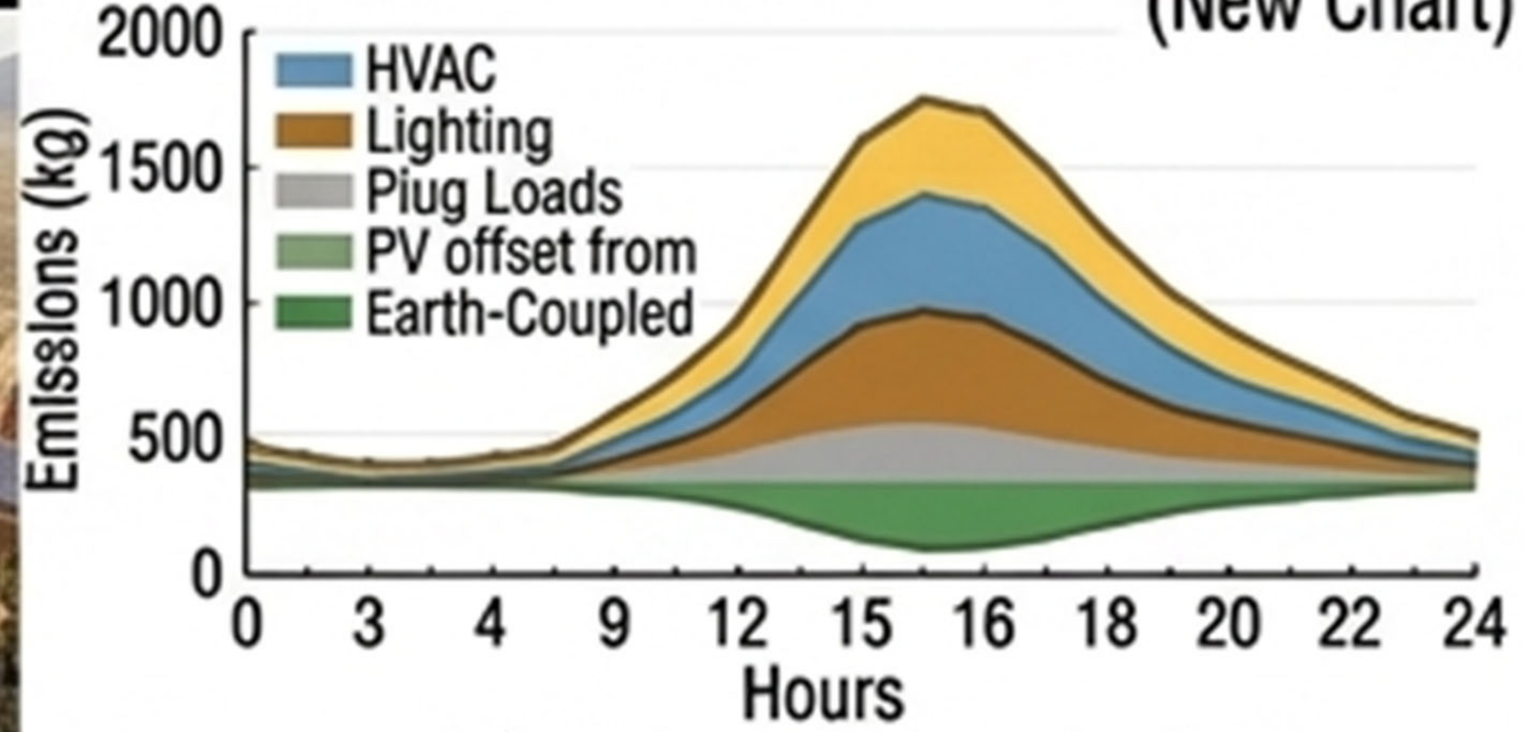
LIFECYCLE CARBON FOOTPRINT (New Charts)

Preserve unique unique chart descriptions unique in text description verbatim in diagram description



HOURLY OPERATIONAL CO_2e BREAKDOWN

(New Chart)



unique in unique verbatim

DETAILED LIFECYCLE REDUCTION

(New Matrix #6)

Lifecycle Phases	critical component Structure	Enclosure	HVAC	Plug Loads
Product	unique unique	typeset typeset	unique unique	unique unique
Construction	unique	uniques description	unique unique	verbatim unique
Use	unique typeset	diagram diagrams	unique unique	unique ırbation
End of Life	unique unique	typeset typeset	unique unique	·uque unique

LA PLAZA RESILIENCE HUB: SUB-DESERT EARTH-COUPLED HUB

ADAPTIVE PORTAL - Arrival & health services for vulnerable populations

ADAPTIVE MATERIALS - Rammed Earth thermal mass for extreme heat resilience

CARBON-SEQUESTRATION GARDENS & XERISCAPE DESIGN

GREEN ROOF MATRIX FOR CARBON STORAGE

AERIAL PASSIVE COOLING COURTYARD

INTEGRATED SYSTEM MOSAIC FOR NET-ZERO EMISSIONS

ADAPTATION INFRASTRUCTURE COST-BENEFIT ANALYSIS (New Table)

preserve unique in text unique unique diagram verbatim descriptions unique in diagram unique diagrams description type in diagrams description

Component	Material	Mass	Embodied CO_2e	Reduction Strategy
Structure	Material	1.80	4600 kg	preserve
Earth	Earth	38.7	117.7 kg	verbatim
Structure	Rammed	33.6	132.7 kg	description
Enclosure	Rammed	36.7	86.7 kg	description
HVAC	Material	0.75	36.2 kg	in verbatim
HVAC	-		3.20 kg	diagrams
Earth-Coupled	Carbons	0.38	3.38 kg	description
Use	Carbons	0.50	2.69 kg	unique
Plug Loads	Lighting	0.29	2.83 kg	typeset type
PV	Offsets	0.056	7.23 kg	in diagrams
Earth-Coupled	Material	0.33	2.32 kg	description

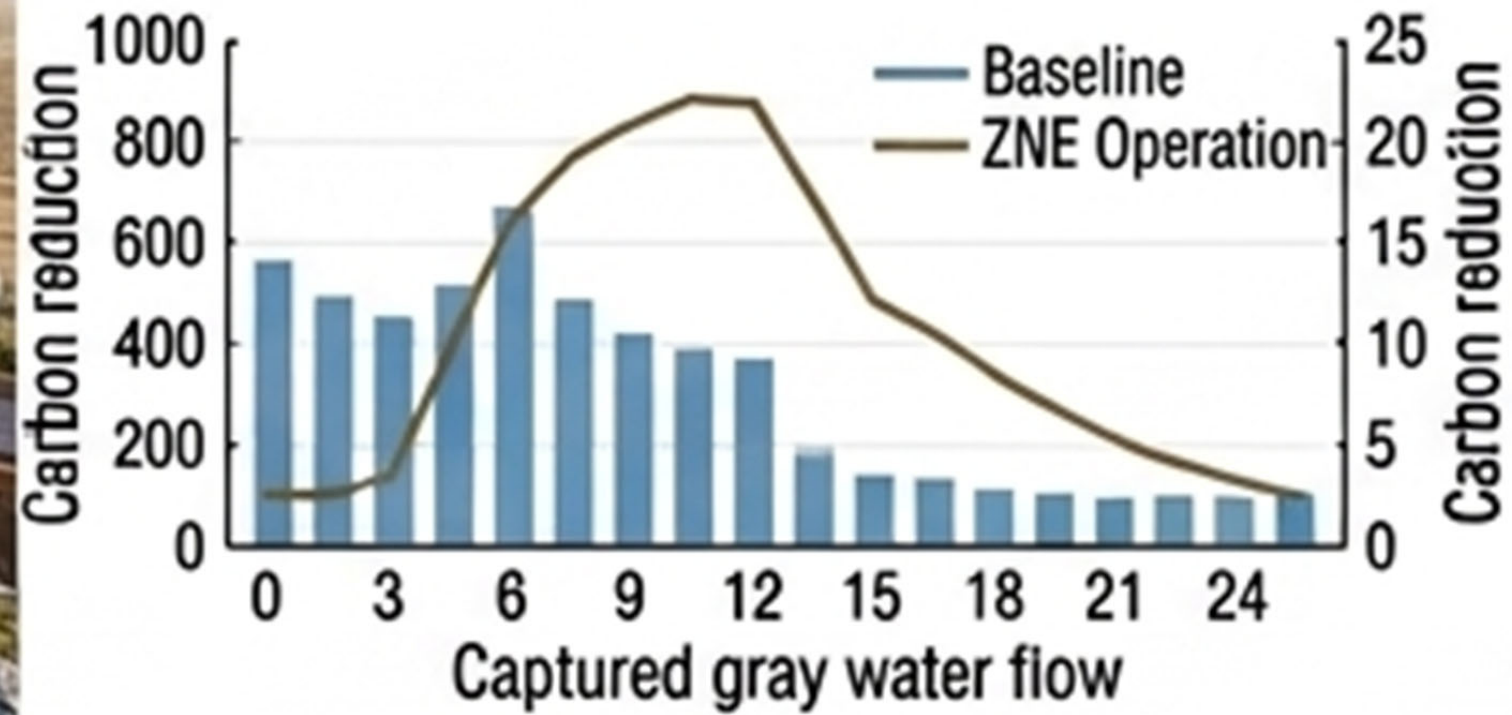
RE-TYPESET DATA TABLE STUDY MATRIX

preserve unique grid diagram description unique typeset description unique description in grid description verbatim description· unique typeset description

COST (per unit detailed)	RESILIENCE BENEFIT (score)	ROI OVER 50YRS typeset typeset typeset)	CASCADING IMPACT MITIGATION (description)
0	4	1.0	-
9	8	1.5	-
10	12	2.6	-
30	3	3.4	-
50	6	2.5	-
50	8	2.4	-
100	10	7.7	-
120	12	12.0	-
150	18	9.6	-
100	20	14.0	-
200	20	37.6	-

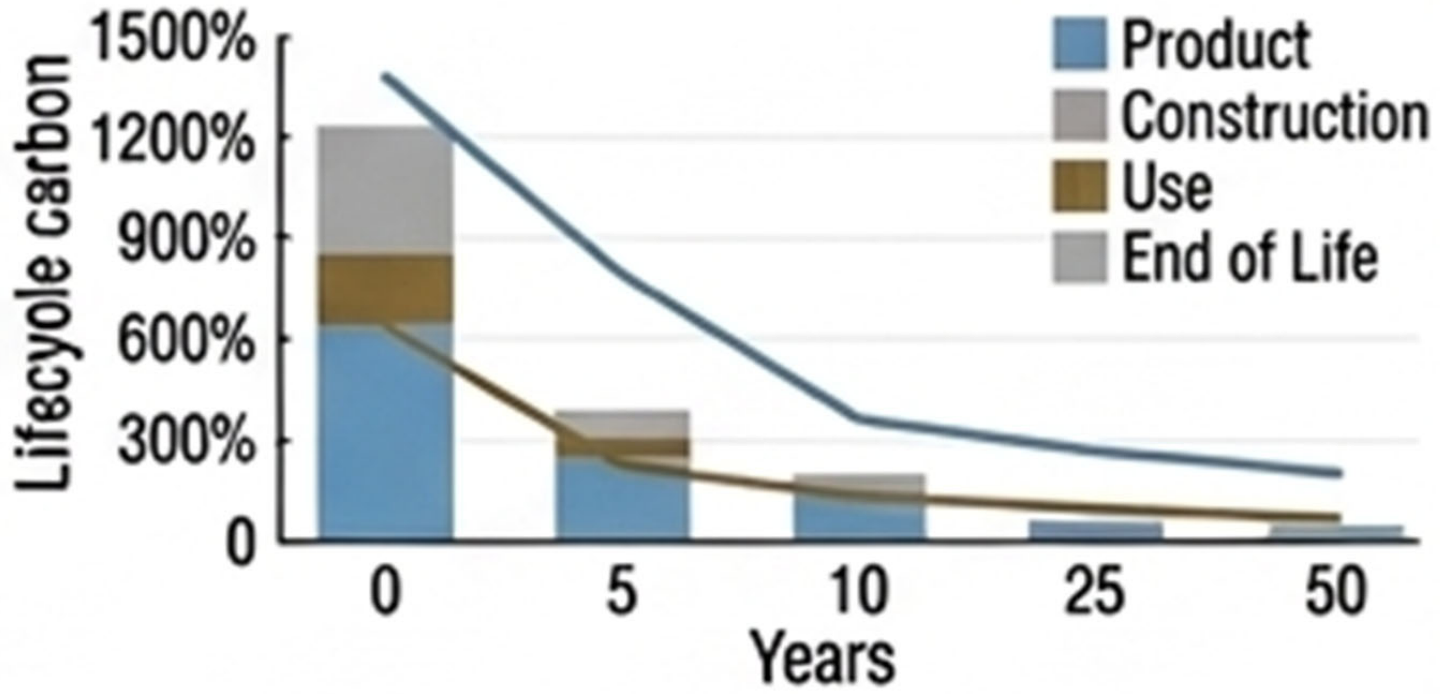
HOURLY OPERATIONAL CARBON REDUCTION

Preserve unique unique chart descriptions unique texts: unique unique in diagram description verbatim



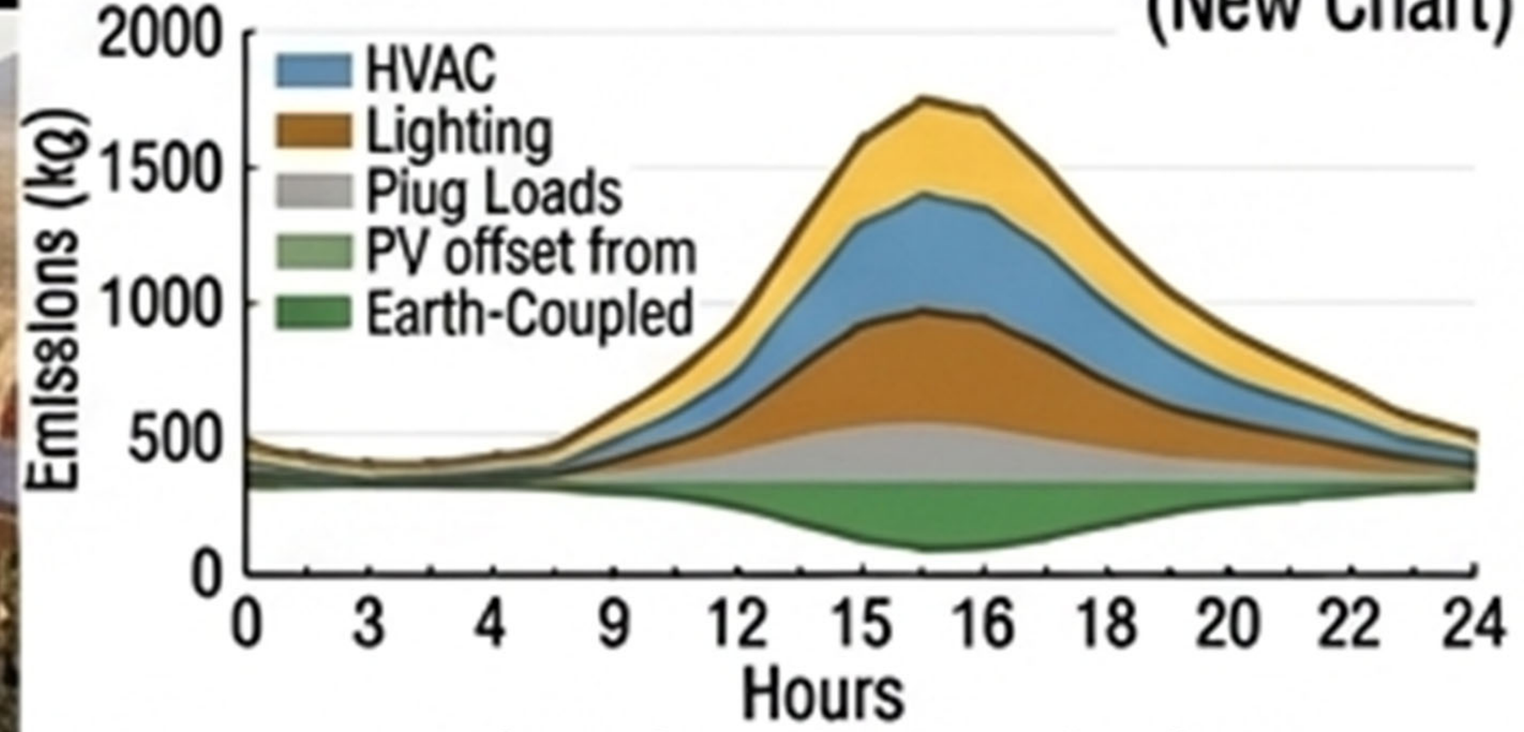
LIFECYCLE CARBON FOOTPRINT (New Charts)

Preserve unique unique chart descriptions unique in text description verbatim in diagram description



HOURLY OPERATIONAL CO_2e BREAKDOWN

(New Chart)



unique in unique verbatim

DETAILED LIFECYCLE REDUCTION

(New Matrix #6)

Lifecycle Phases	critical component Structure	Enclosure	HVAC	Plug Loads
Product	unique unique	typeset typeset	unique unique	unique unique
Construction	unique	uniques description	unique unique	verbatim unique
Use	unique typeset	diagram diagrams	unique unique	unique verbation
End of Life	unique unique	typeset typeset	unique unique	unique unique

HELIOTROPIX: BIOCLIMATIC INNOVATION COMMONS