



*Architectural Koyaanisqatsi:
10-year, 100-year, 1000-year buildings*

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Adjunct Faculty, University of Texas School of Architecture
VP of Design Phase Services, Salas O'Brien

...don't forget to tell your story about the first time you spoke to Joe and Betsy...



Chapter 1

10-year
100-year
1000-year
buildings

fash·ion

/'faʃHən/

change for its own sake

per·for·mance

/pər'fôrməns/

*the action or process of carrying out
or accomplishing an action, task, or function*

Performance > Fashion







600

6553

DURNEY-11-SITE-600

- ANIMAL WELLBEING
- VACCINES & PREVENTION
- HOUSE CALLS
- PHYSICIAN MEDICINE
- LASER THERAPY
- ACUPUNCTURE
- PAIN MANAGEMENT
- INTERNAL MEDICINE
- DERMATOLOGY
- PHYSIOLOGY & NUTRITION
- DENTISTRY & ORAL CARE
- WOUND-CARE
- PHYSICIAN
- SAUNAS
- CLUBS

Barley SWINE
FINLEY'S BARBER SHOP
KICK
BURRINA'S
PAZ

PORSCHE
Cayenne

Architecture needs to be craft, not art

If a pleasure-giving function predominates, the artifact is called art; if a practical function predominates, it is called craft.

- Henry Glassie



NO: *form follows function*

YES: *adaptive reuse**

*flexibility is really important!









A building is not something you finish.

A building is something you start.

– Stewart Brand



Mormon Temple, 1853

Salt Lake City

*designed to last for **eternity***

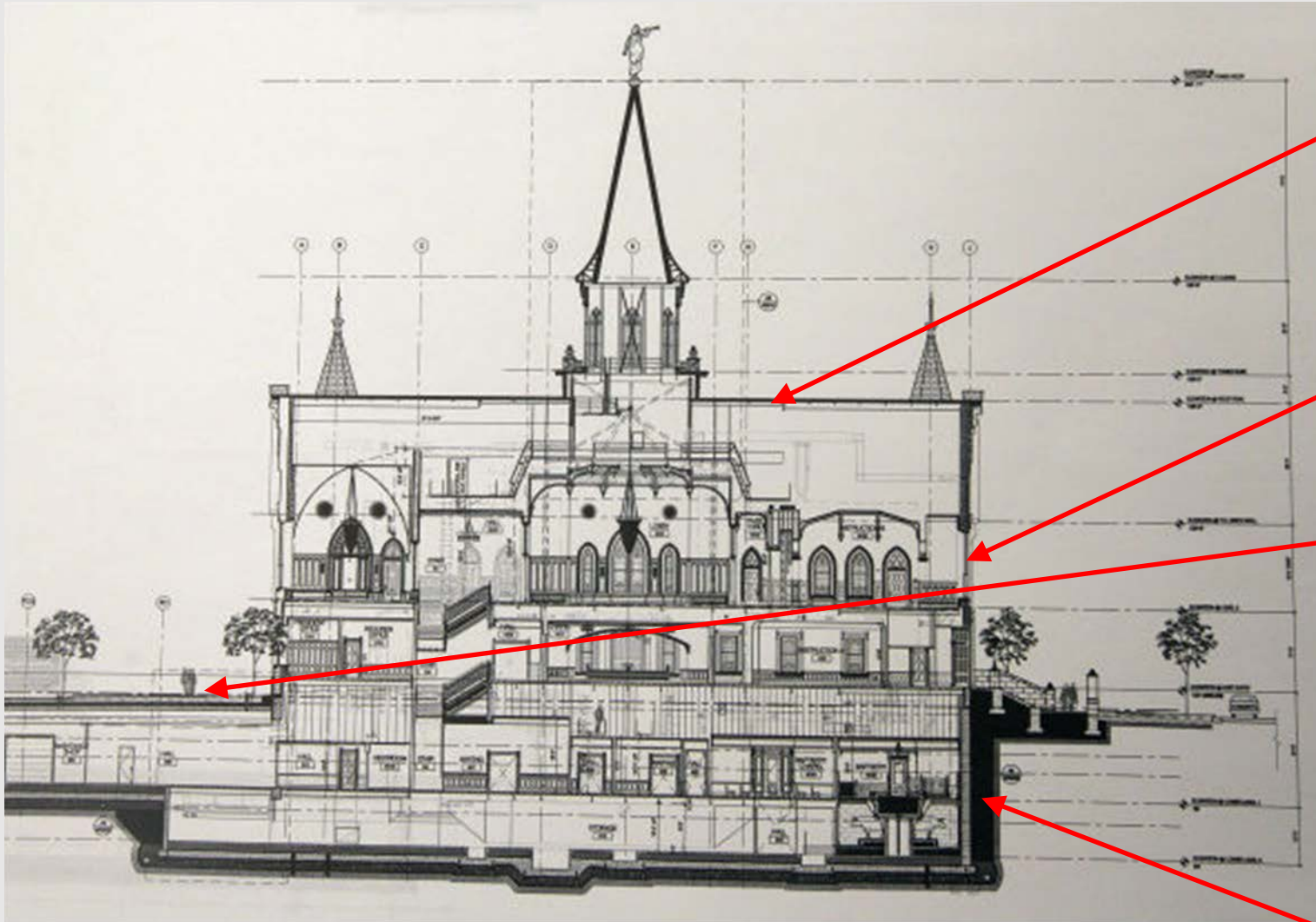




Mormon Temple, 1853

Salt Lake City

Architect Truman O. Angell

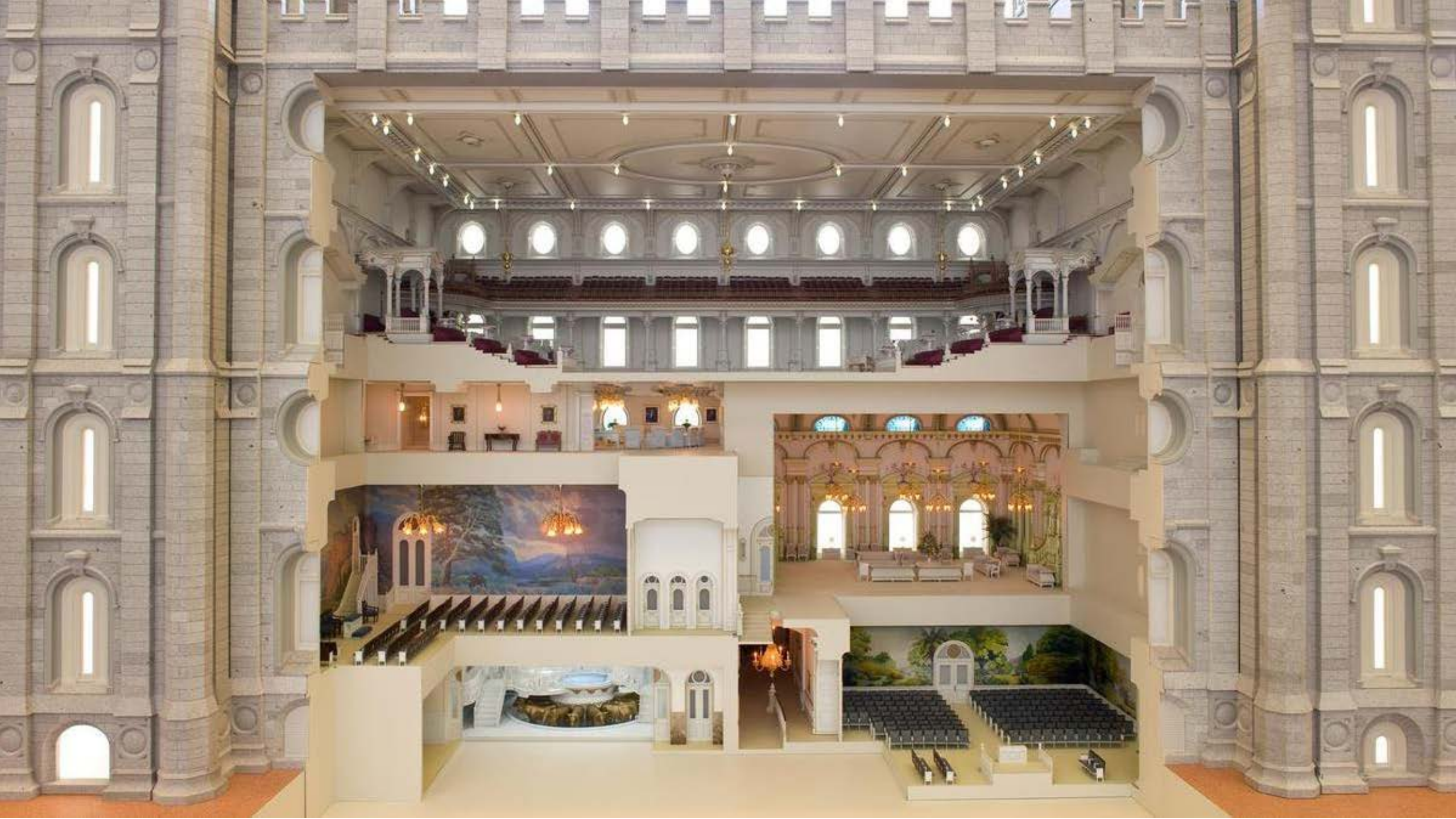


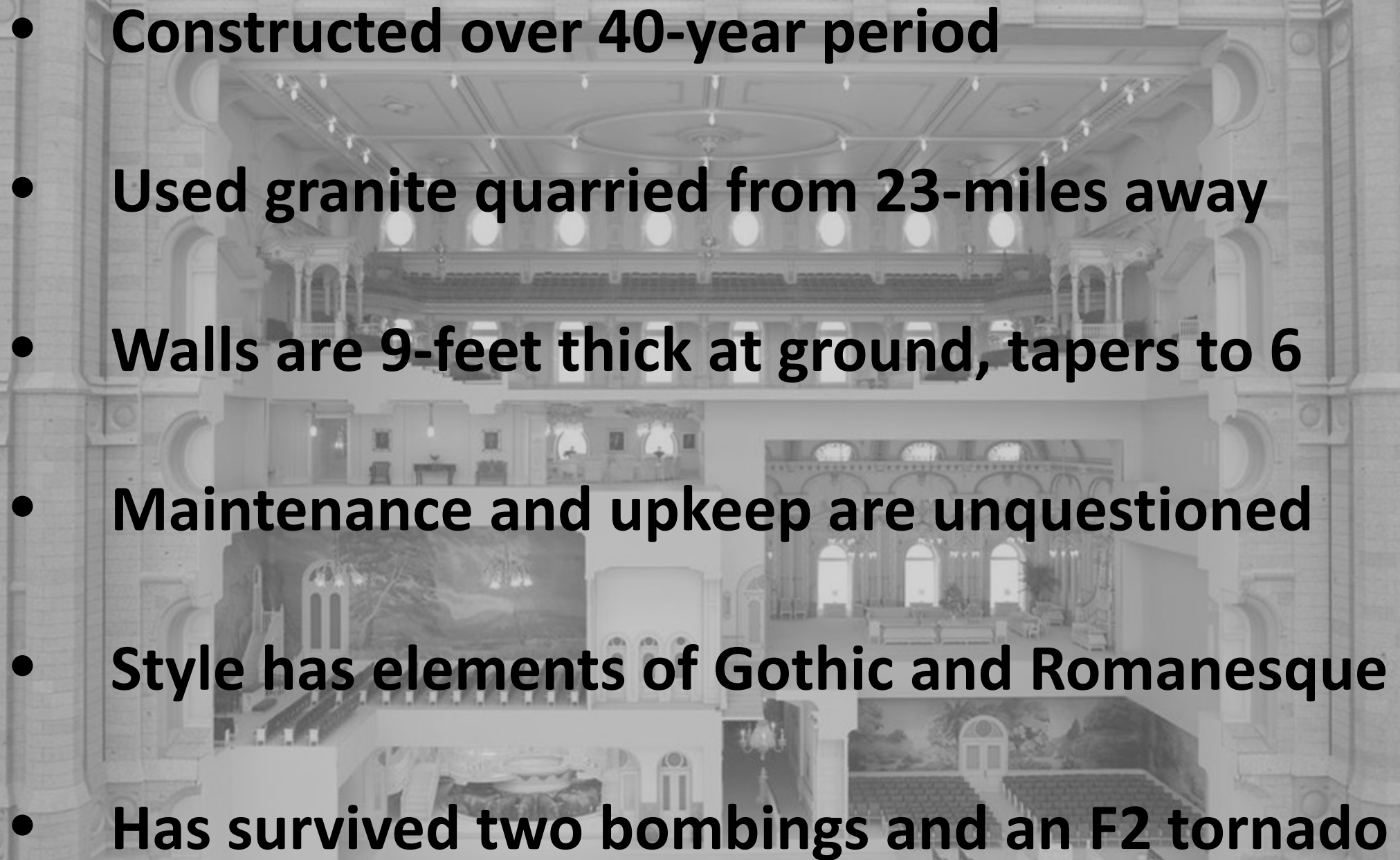
Roofing

Fenestration

Green roof with
occupiable space below

Below-grade waterproofing



- 
- **Constructed over 40-year period**
 - **Used granite quarried from 23-miles away**
 - **Walls are 9-feet thick at ground, tapers to 6**
 - **Maintenance and upkeep are unquestioned**
 - **Style has elements of Gothic and Romanesque**
 - **Has survived two bombings and an F2 tornado**



What do we
teach in
architecture
schools?



A hand-drawn sketch of an open book, rendered in white lines on a black background. The book is shown from a top-down perspective, with the pages slightly curved. The text is centered on the pages.

Chapter 2

The Architect















Malcolm
Wells

*The
Architect*

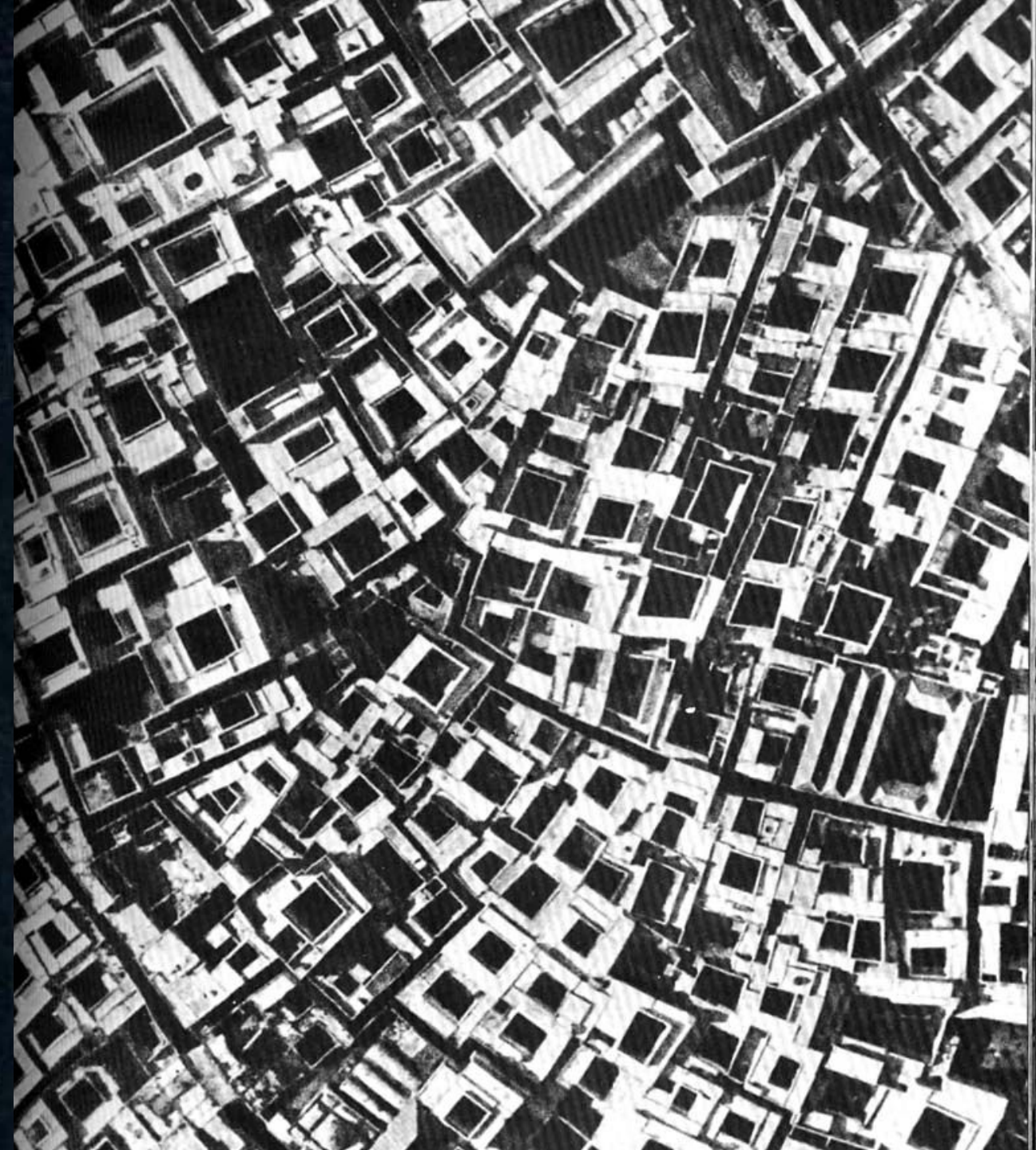




Architecture Without Architects

A Short Introduction
to Non-Pedigreed
Architecture

Bernard Rudofsky





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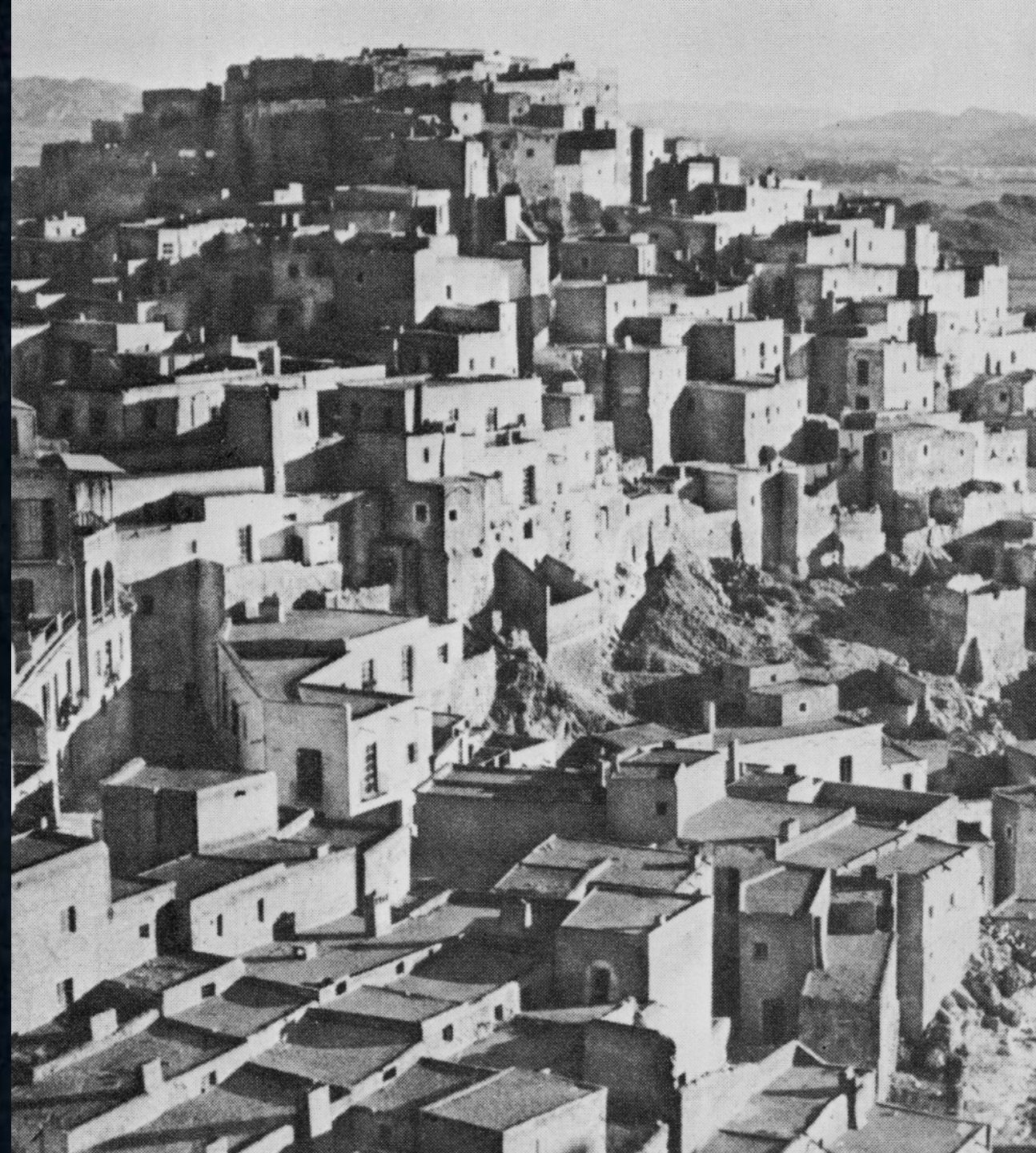




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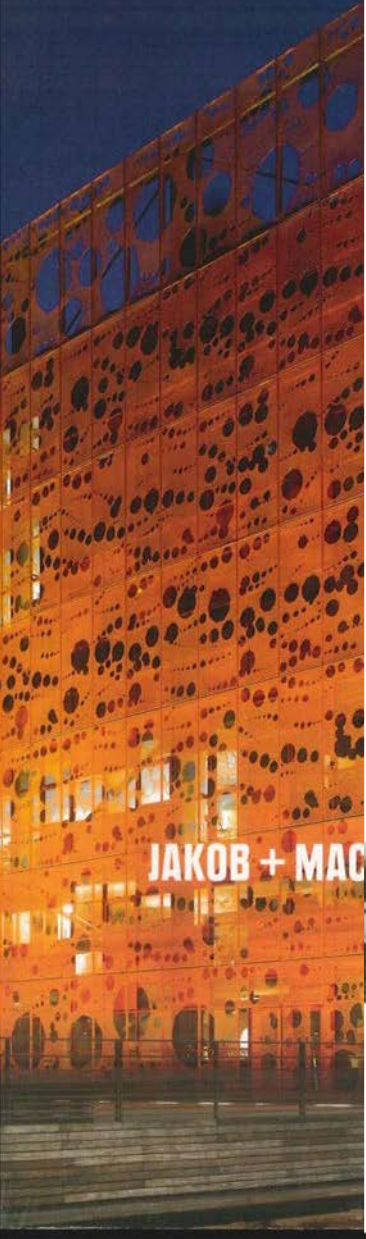
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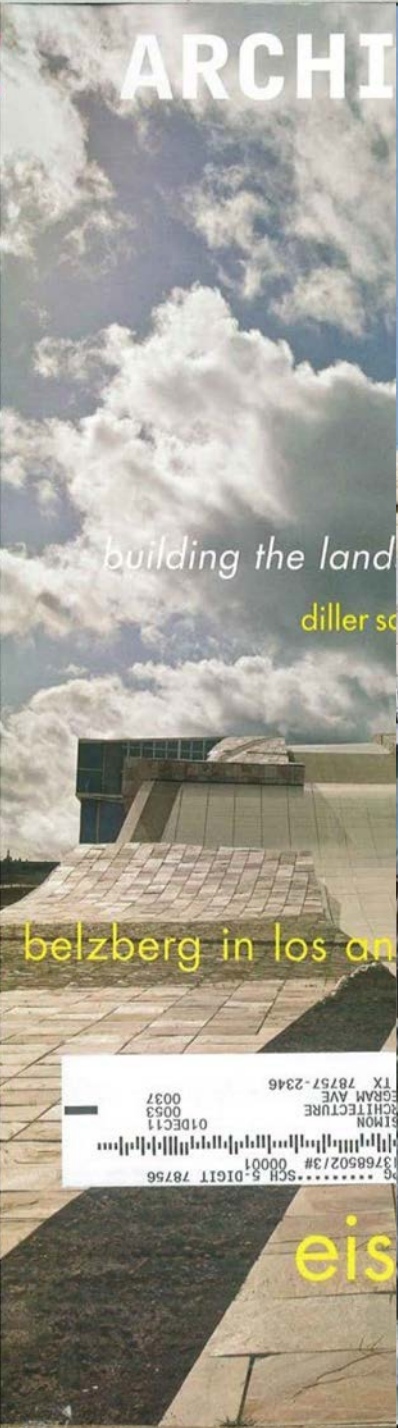
ARCHITECTURAL RECORD



JAKOB + MAC



Pg.SCH 5-DIGIT 78756
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SIMON
EGRAM AVE
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0021



building the land
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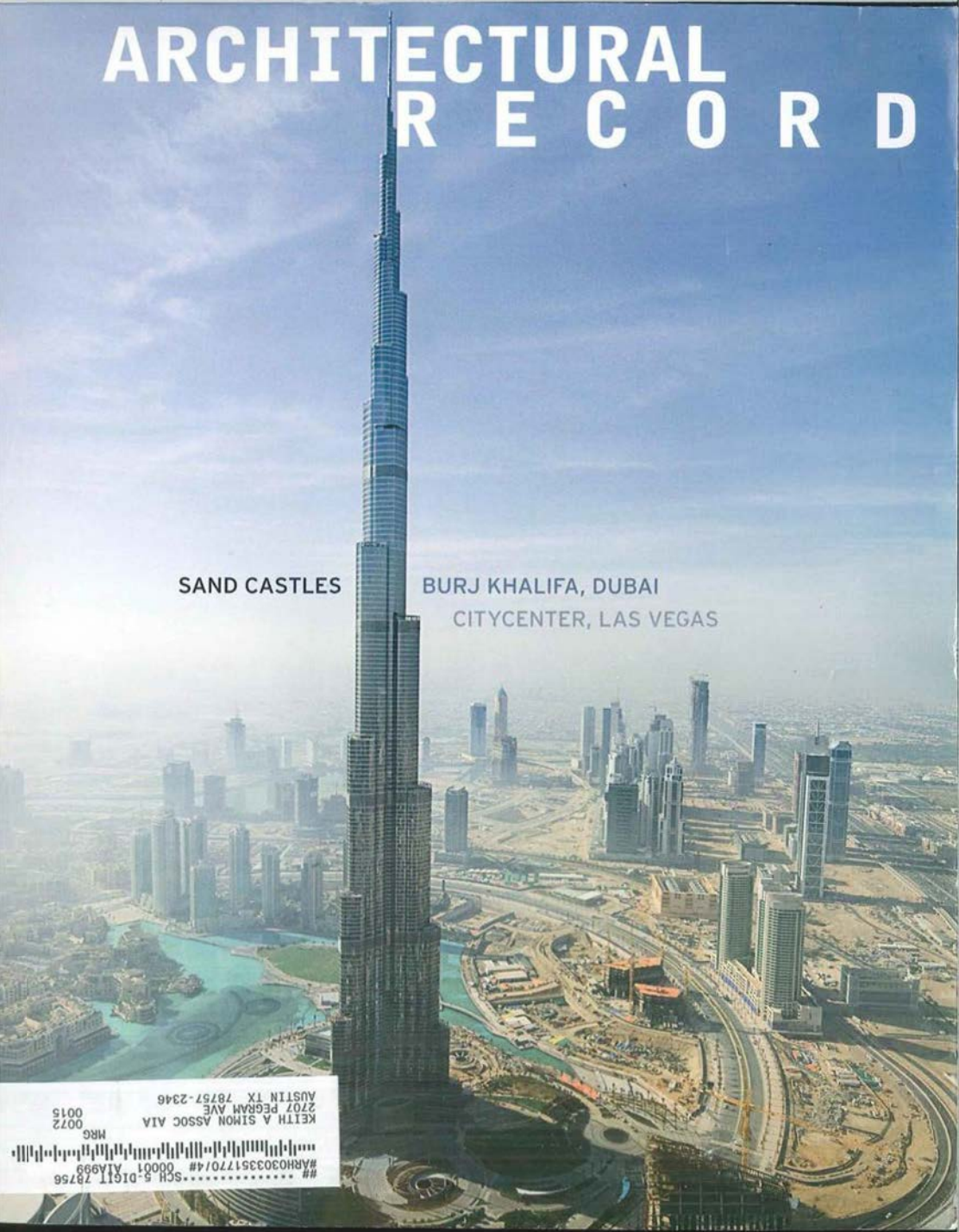
eis



REX IN IST
CARPEN
HOK IN SAUDI A



America



SAND CASTLES

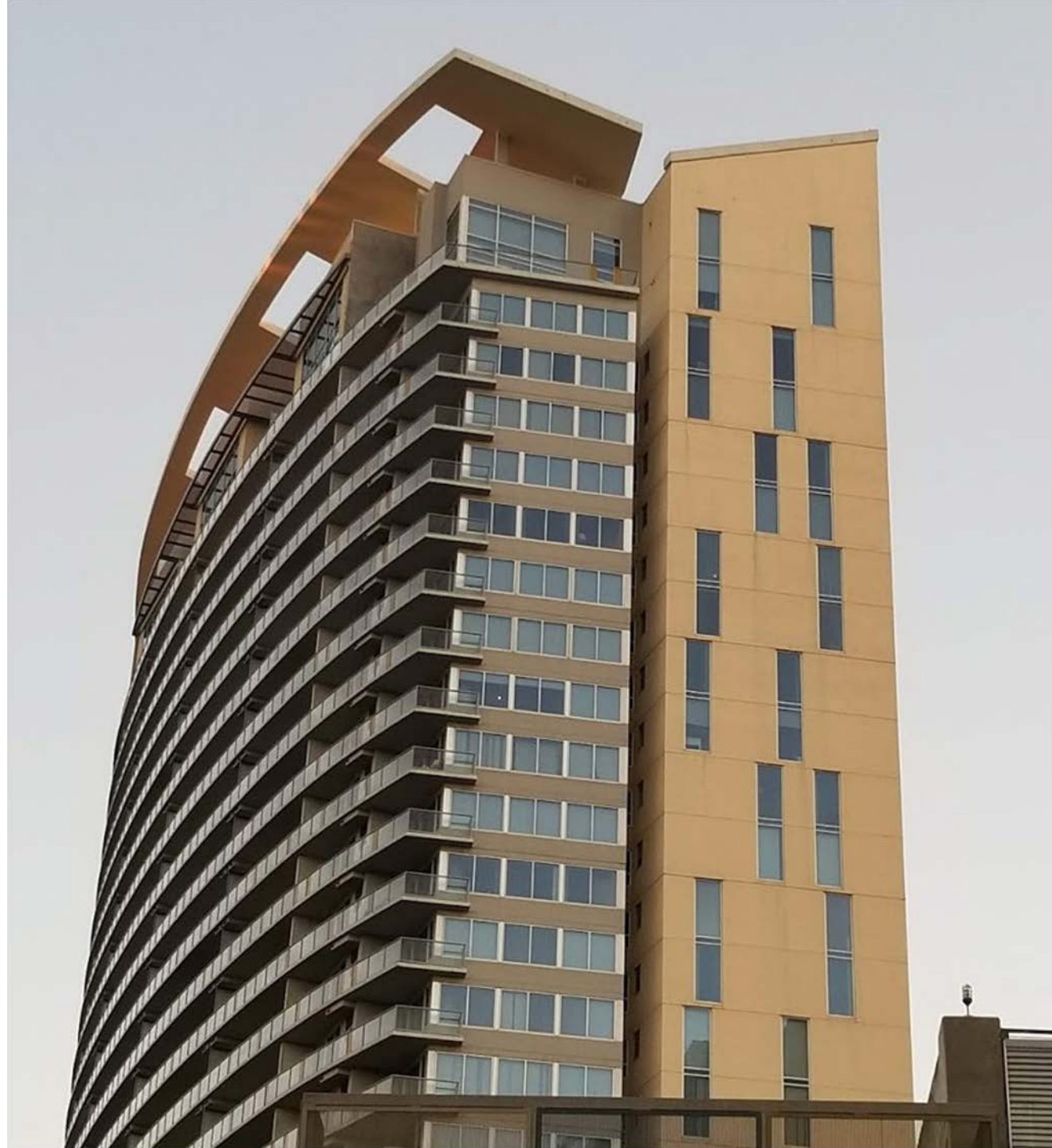
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CITYCENTER, LAS VEGAS

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MRG
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2707 PEGRAM AVE
AUSTIN TX 78757-2346
0072
0015



Chapter 3

The Emperor
has no
clothes!







Chapter 4

Durability..at
long last!

“this is a 100-year building”

“this is a 50-year building”

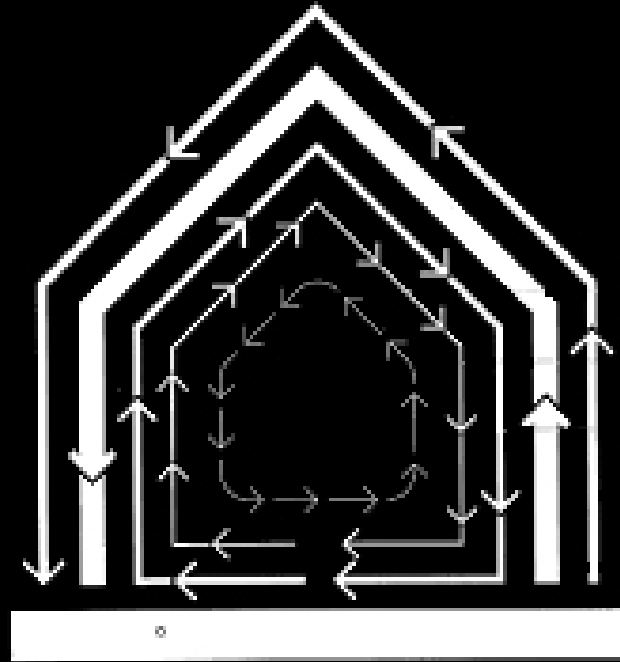
“this is a 30-year building”

“this is a 5-year, max, building”

Stewart
Brand

*How
Buildings
Learn*

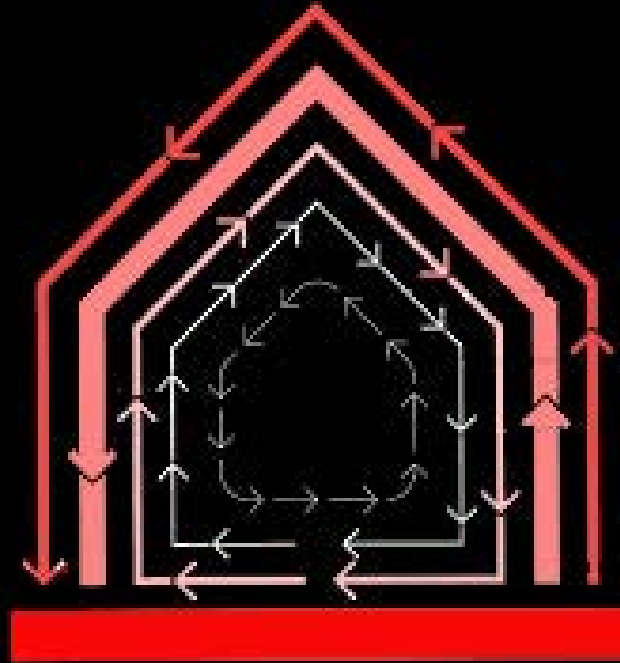
*Shearing
Layers of
Change*



Stewart Brand

*How
Buildings
Learn*

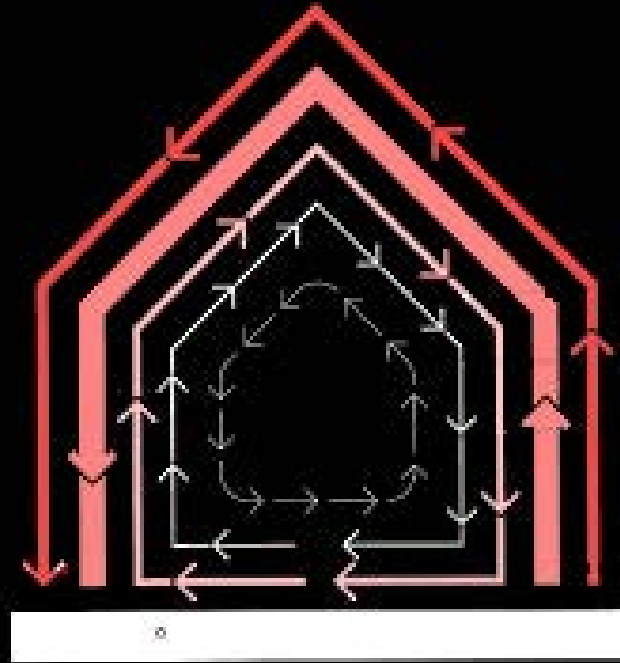
*Shearing
Layers of
Change*



Stewart
Brand

*How
Buildings
Learn*

*Shearing
Layers of
Change*

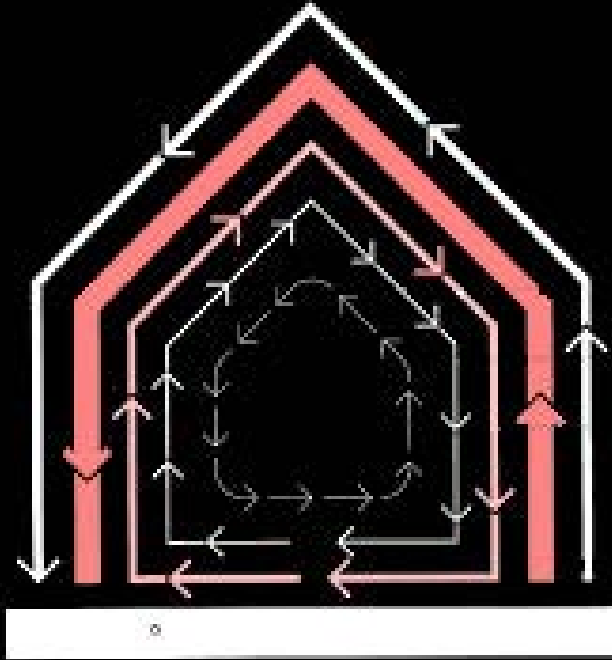


Site: Eternal

Stewart Brand

*How
Buildings
Learn*

*Shearing
Layers of
Change*

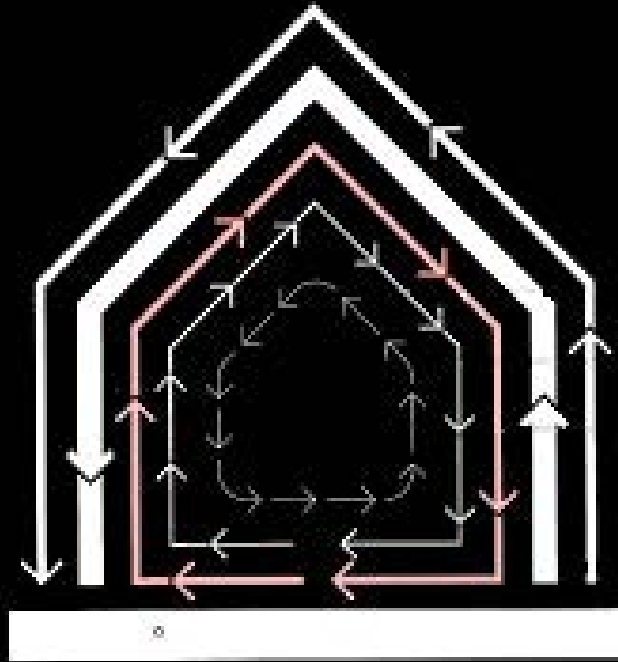


Structure: 30-3000 years

Stewart
Brand

*How
Buildings
Learn*

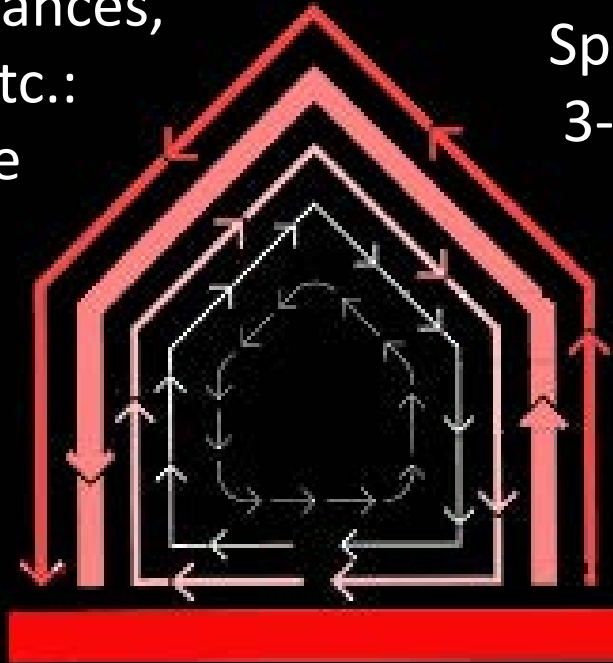
*Shearing
Layers of
Change*



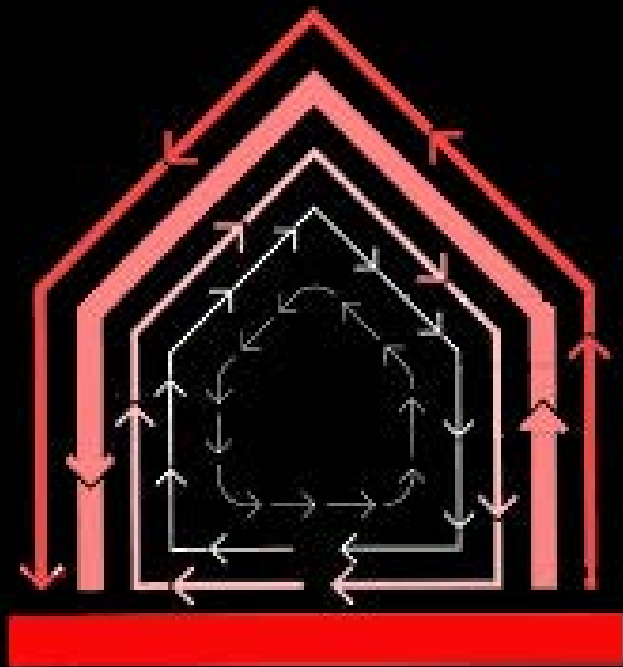
Enclosure: 20-2000 years

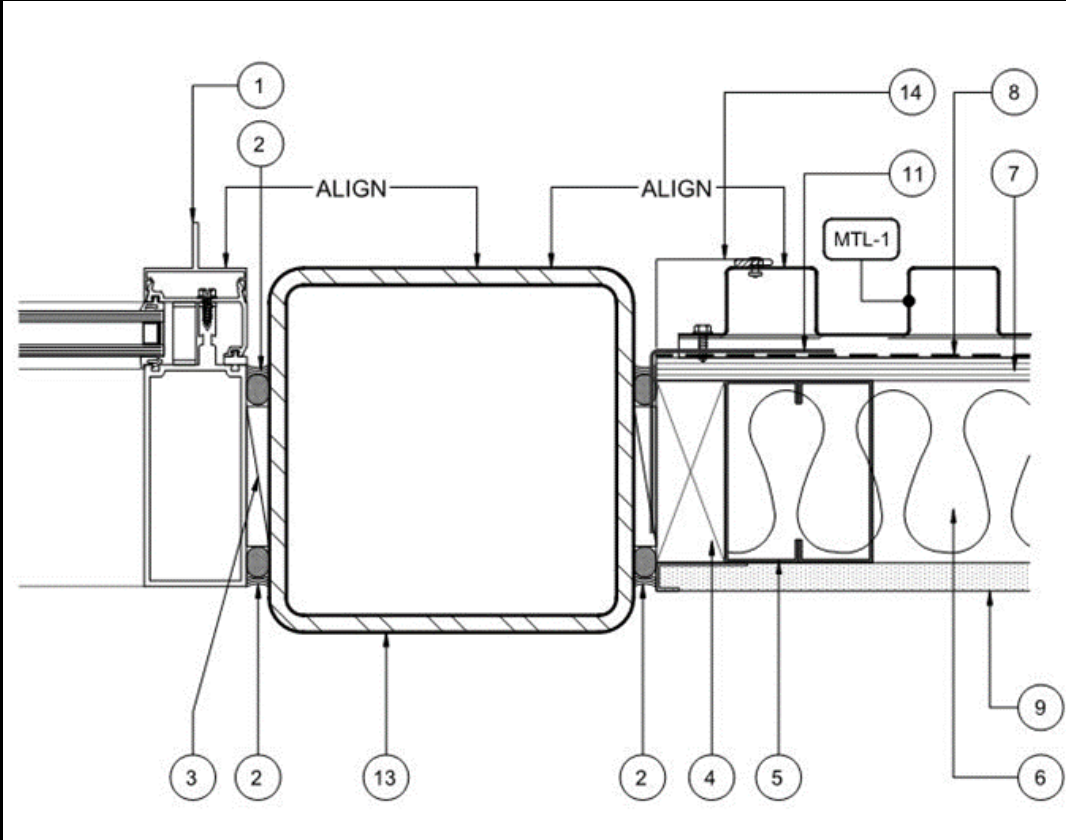
Stuff (furniture, appliances,
pictures, lamps, etc.):
constant change

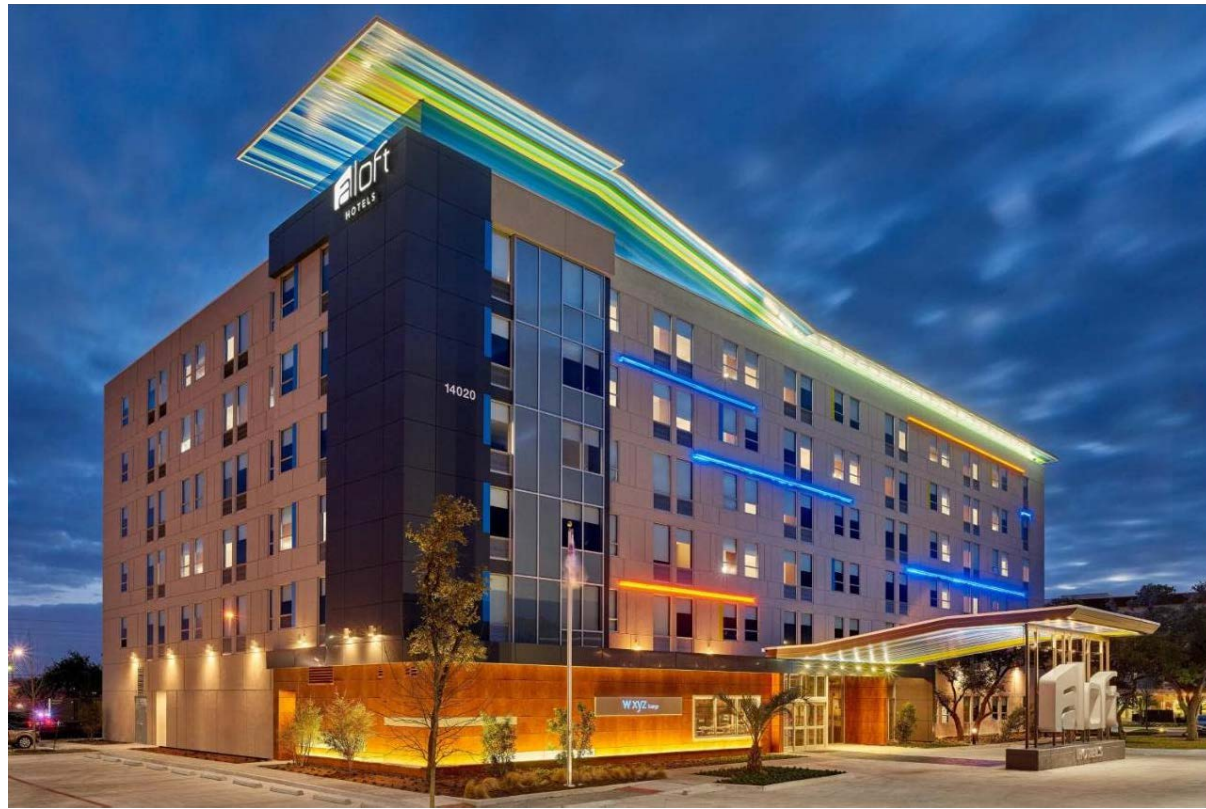
Space plan:
3-30 years



Services: 5-15 years





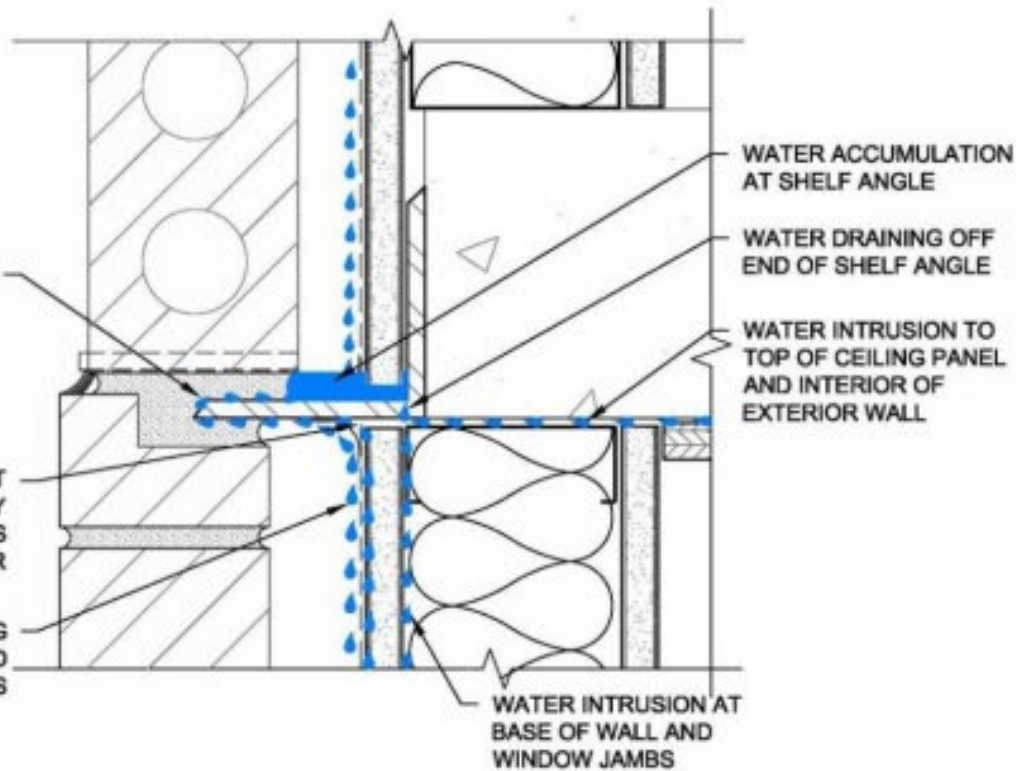




WATER MIGRATION VIA ABSORPTION AND SURFACE TENSION TO WEATHER BARRIER BELOW SHELF ANGLE

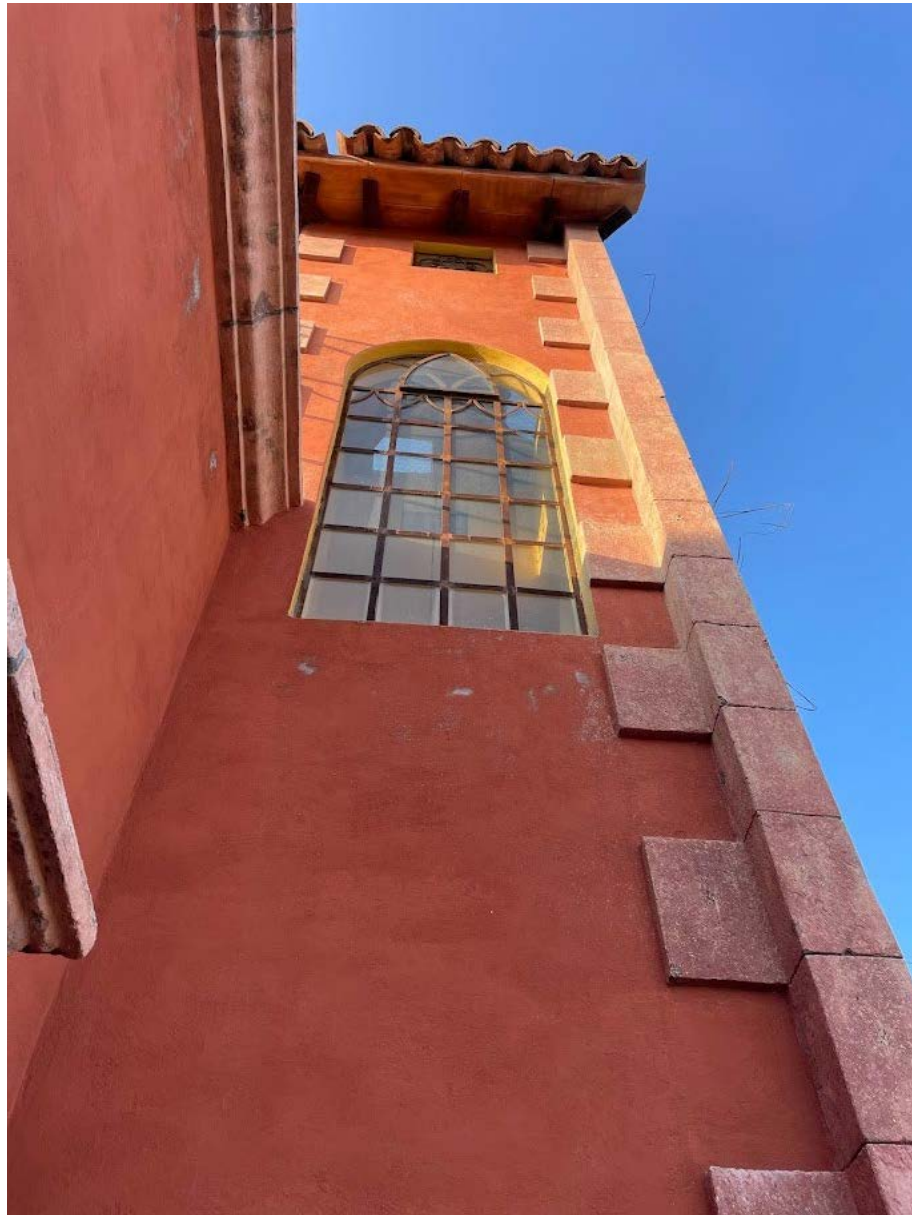
WATER INFILTRATION PAST WEATHER BARRIER AT POORLY BONDED TAPE OR DEFICIENCIES (CUTS) IN WEATHER BARRIER

ADDITIONAL WATER DRAINING TOWARD SHELF ANGLE AND FLASHING AT LOWER FLOORS











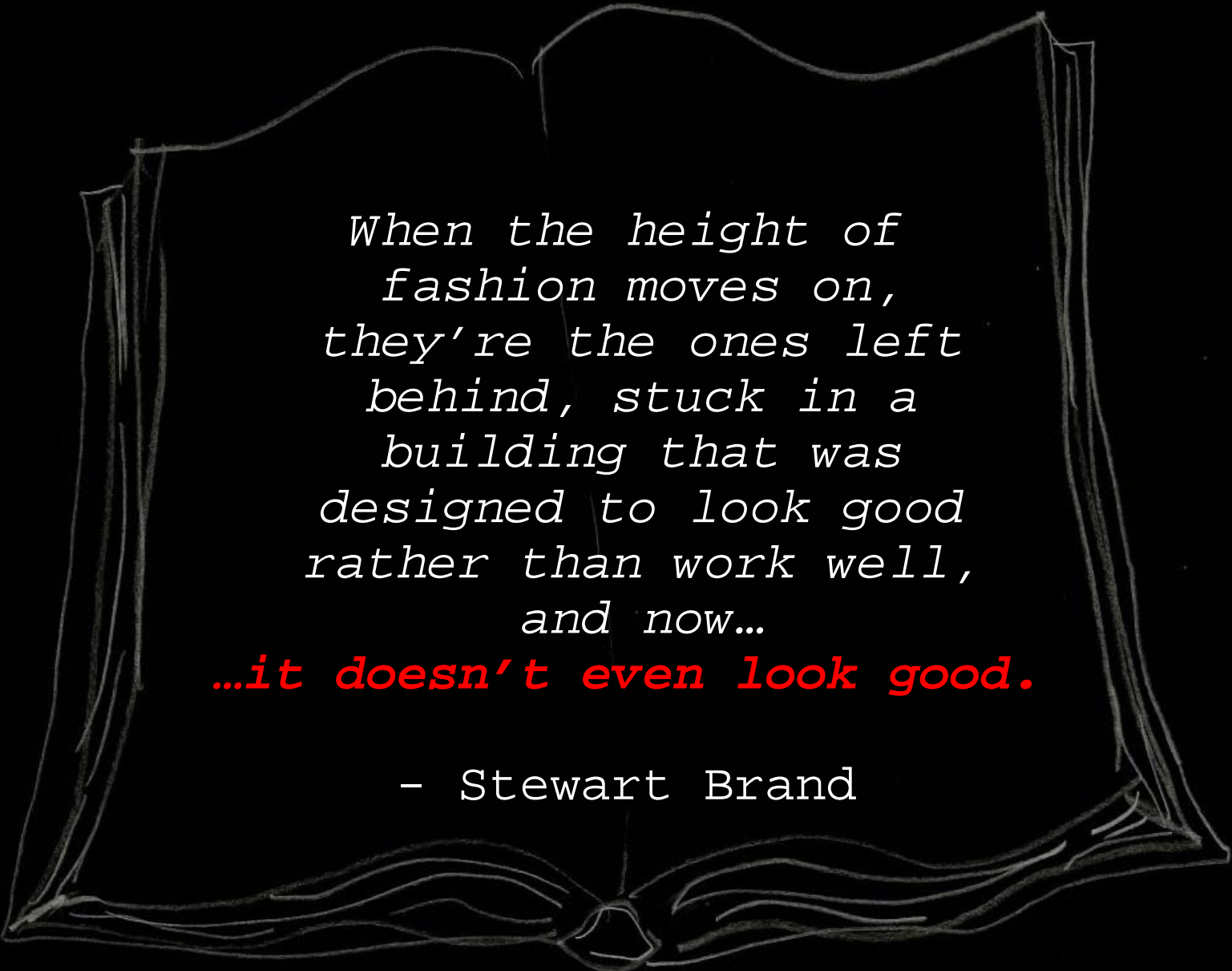
***Style cramps life,
and life erodes style.***

– Stewart Brand



Mount Angel Library, Oregon
Alvar Aalto (1970)





*When the height of
fashion moves on,
they're the ones left
behind, stuck in a
building that was
designed to look good
rather than work well,
and now...*

...it doesn't even look good.

- Stewart Brand

Angkor Wat (1400s) 600+ years old
(photo from Craig D. Tillman)



Fenland Cottage (1750) 250 years old



Arts and Crafts

1890-1920

100+ years old

Red House (1860) William Morris and Philip Webb





From The Archives

c. 1910 Arts & Crafts (Craftsman)

Austin, Texas

Bedrooms	4
Full Baths	2
Heated Sq. Ft.	2,750
Stories	1
Acres	0.2
Lot Size	75' x 130'

The Bailey-Houston House



Front view

Beautifully restored 1910 Craftsman Bungalow on oversized lot in Hyde Park

The Bailey-Houston House which has been designated a City Historic Landmark is considered to be Austin's premier Craftsman bungalow.

Scroll down for more information



Living room

Spacious living room with original long leaf pine paneling, river rock fireplace, beamed ceiling, built-in bookcases



Living/Dining

Built-in bookcases separate the formal living and dining rooms



Kitchen

Enlarged kitchen with tile floor, many windows, built-in cupboard



Listing No. 2754

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- ❖ [Pricing and Services](#)
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Your Feedback

"The website is a pleasure to manage listing information from a

Victorian

1837-1901

100+ years old

1900s-ish
The Main Line, Philadelphia



The Painted Ladies, 1890
Matthew Kavanaugh



International Style

Art Moderne

Art Deco

1920-1945

80-100 years old

Kiefhoek housing, Rotterdam, by Jacobus Oud



Fagus Factory, Alfeld,
Walter Gropius







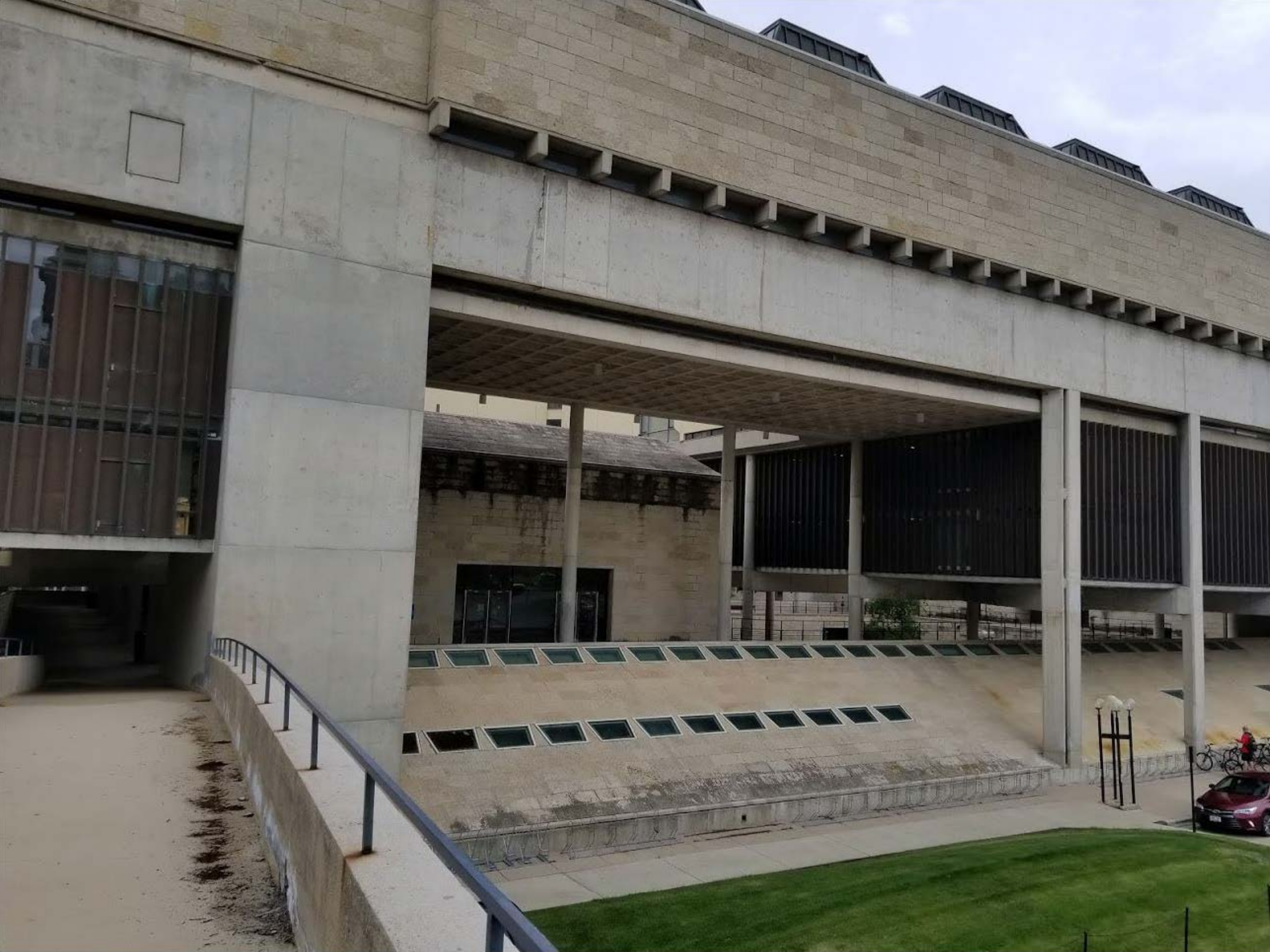
Brutalism

1950-1975

50-75 years old

Boston City Hall, 1968
Kallmann McKinnell & Knowles

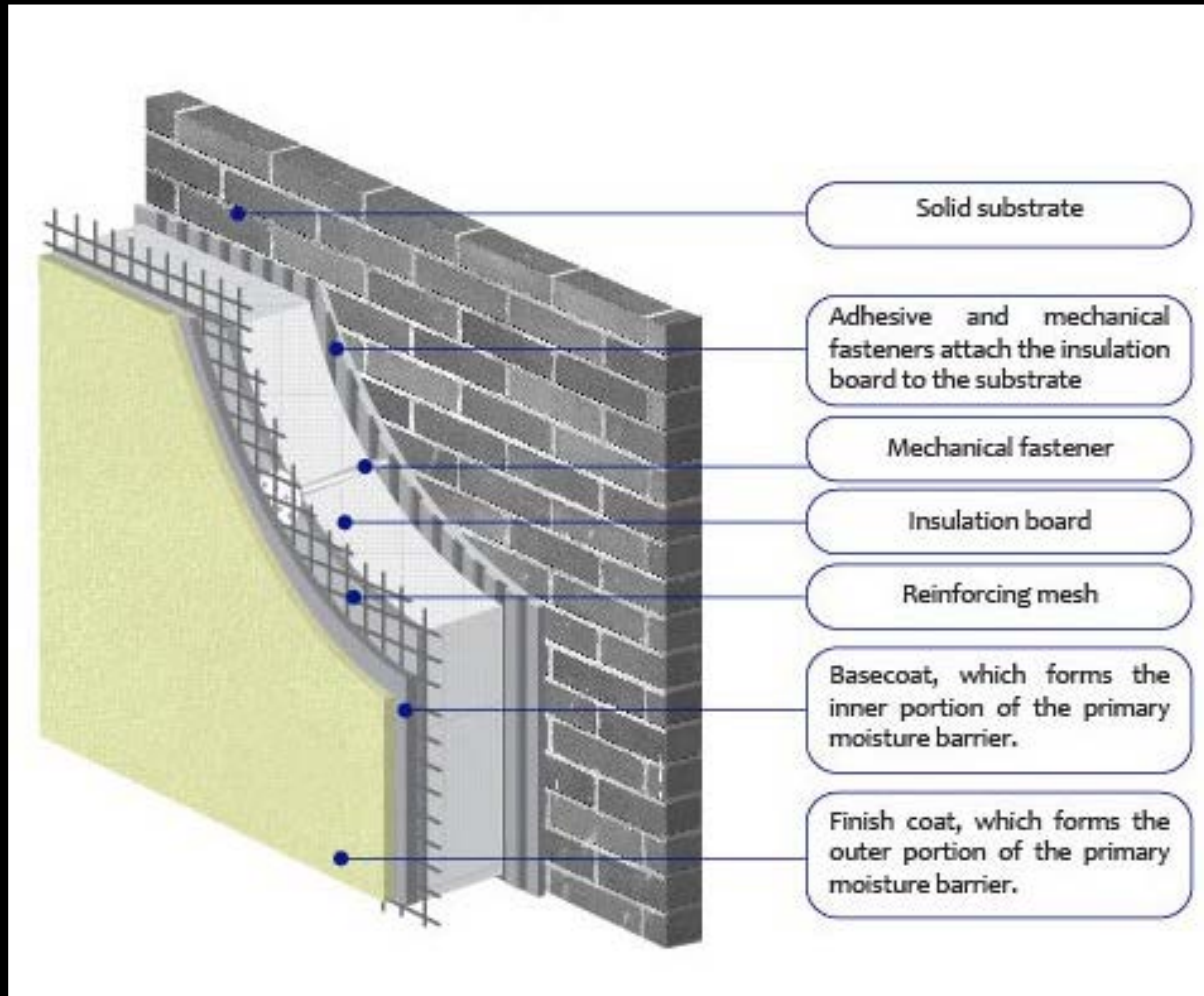












https://www.google.com/search?client=firefox-b-1-d&biw=1920&bih=966&tbm=isch&sa=1&ei=2vhzXPCRDCWIsQXZnlcw&q=wrapping+concrete+building+with+EIFS&oq=wrapping+concrete+building+with+EIFS&gs_l=img.3...77946.82264..82567...0.0..0.134.3205.31j5..1....1..gws-wiz-img.....35i39j0j0i67j0i5i30j0i8i30j0i24.c1iSrMcxo7c#imgrc=_gy779pByxFVsM:



Brutalist Calendar 2024



ISBN 978-1-912018-49-9
£25

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the_brutalist_ • Follow
Leeds, England, United Kingdom



the_brutalist_ Bank House, Leeds, U.K

Designed by Building Design Partnership. Built 1969–71, listed Grade II. Building Design Partnership was conceived as the world's first interdisciplinary practice. Bank House, completed just 10 years later, is an exemplar of the firm's ambition to combine complex engineering solutions with its own designs. The building is square on plan and, at five storeys in height, adopts the form of an inverted ziggurat with a central light well penetrating the top two floors. It is of in-situ cast, reinforced concrete construction, clad in grey granite and bronze

Built : 1971

Photos : Simon Phipps

* No copyright infringement intended, to modify / remove please message*

#leeds #leedsleedsleeds #uk #england #bank #blackandwhite #blackandwhitephotography #monochrome #yorkshire #concrete #brutalist #brutalism #architecture #instadaily #instagood #photography #travelgram #travelphotography #europe #travel #explore #explorepage #streetphotography

2w



solnechny_alexander 🍷🍷🍷



2w 1 like Reply



719 likes

July 7



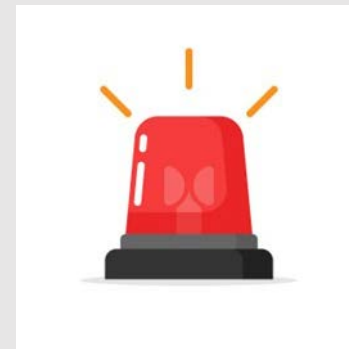
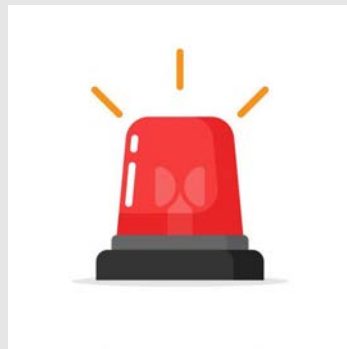
Add a comment...

Post

Postmodernism

1960-1990

30-60 years old



Portland Municipal Services Building
Michael Graves
1982



Water pumping station, Isle of Dogs, London,
1988 (John Outram) Reid and Peck / RIBA



Wexner Center for the Arts, 1989
Peter Eisenman





Every building is potentially immortal, but very few last half the life of a human.

- Stewart Brand

Arrhenius Equation

For every 10-degree K rise
Activation Energy Doubles

$$k = Ae^{-E_a/(RT)}$$

Damage Functions:

- Water
- Heat
- UV Radiation

Joseph Lstiburek, Ph.D., P.Eng, ASHRAE Fellow

Building Science

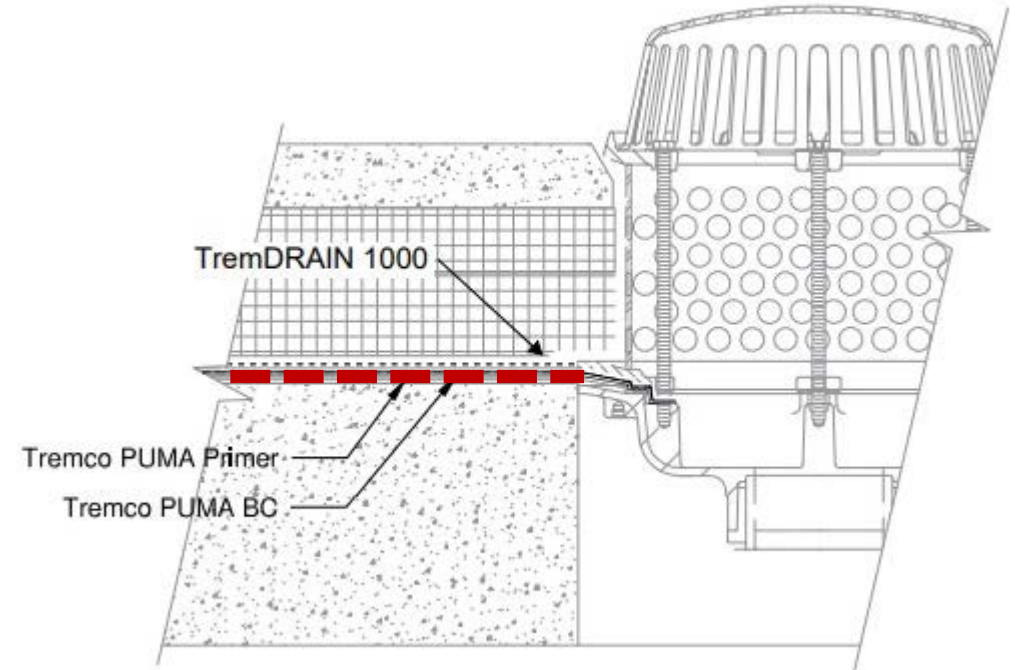
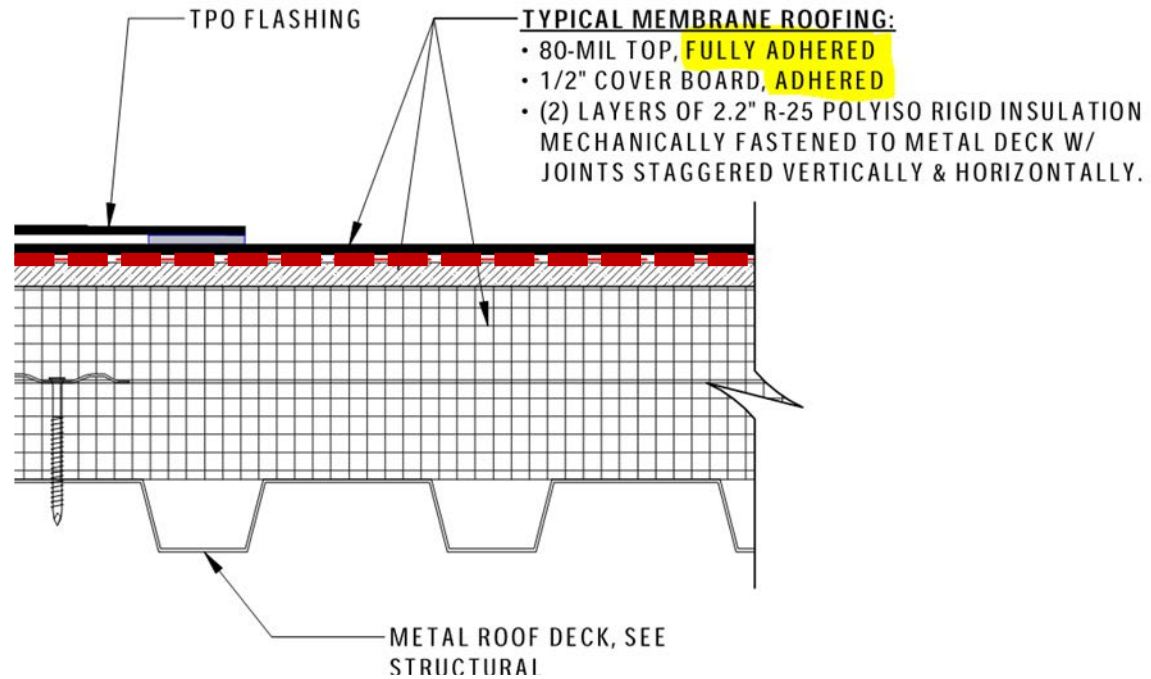
Adventures In Building Science

www.buildingscience.com

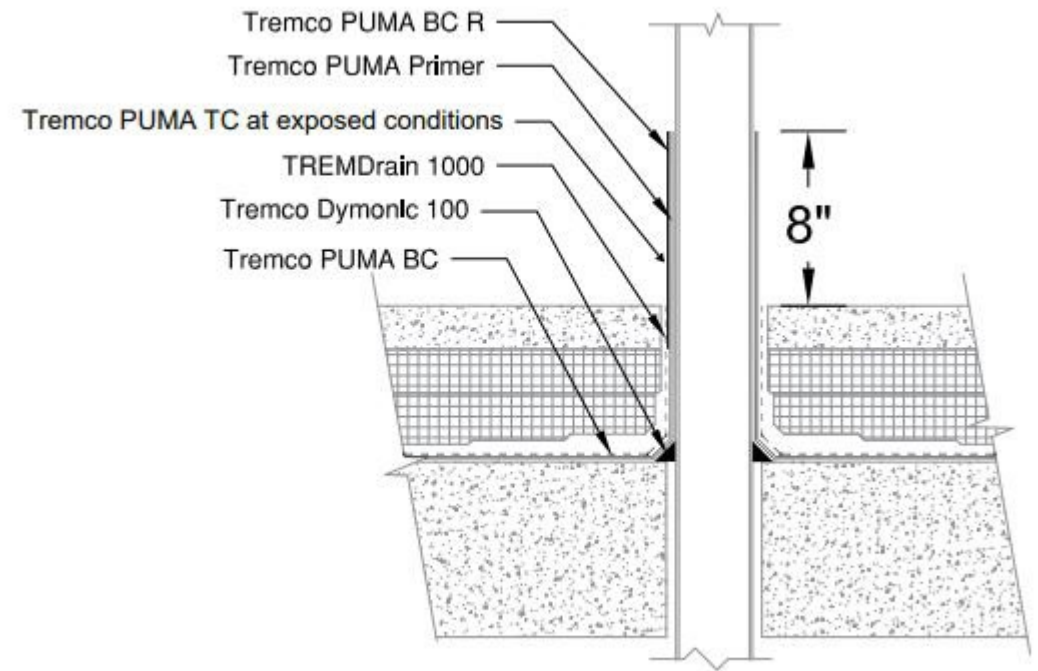
Single Ply v. Built Up

	Specified TPO Roofing	Other Single Ply	Modified Bitumen
Redundancy	Poor to Moderate	Poor to Moderate	Very Good
Construction	Good ¹	Good ²	Good
History	Poor	Moderate to Good	Good
Durability	Poor	Poor to Good ³	Very Good ⁴
Initial Cost	\$8 to \$10 per SF	\$9 to \$11 per SF	\$18-\$22 per SF
Warranty	15-25 years	15-25 years	20-35 years ⁵

Typical Roofing v. IRMA



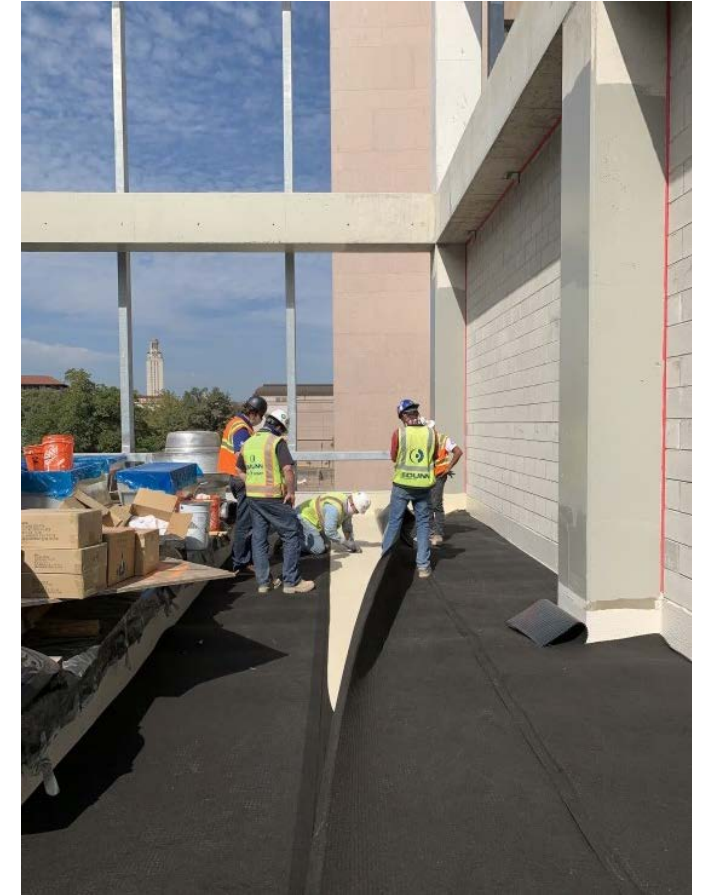
Texas Facilities Commission (TFC) Central Utility Plant (CUP) – Phase I Capitol Expansion



Texas Facilities Commission (TFC) Central Utility Plant (CUP) – Phase I Capitol Expansion: **PMMA/Cold Fluid-Applied Waterproofing**



Texas Facilities Commission (TFC) Central Utility Plant (CUP) – Phase I Capitol Expansion: Drainage Mat



Texas Facilities Commission (TFC) Central Utility Plant (CUP) – Phase I Capitol Expansion: **Rigid Insulation**



Texas Facilities Commission (TFC) Central Utility Plant (CUP) – Phase I Capitol Expansion: **Overburden**











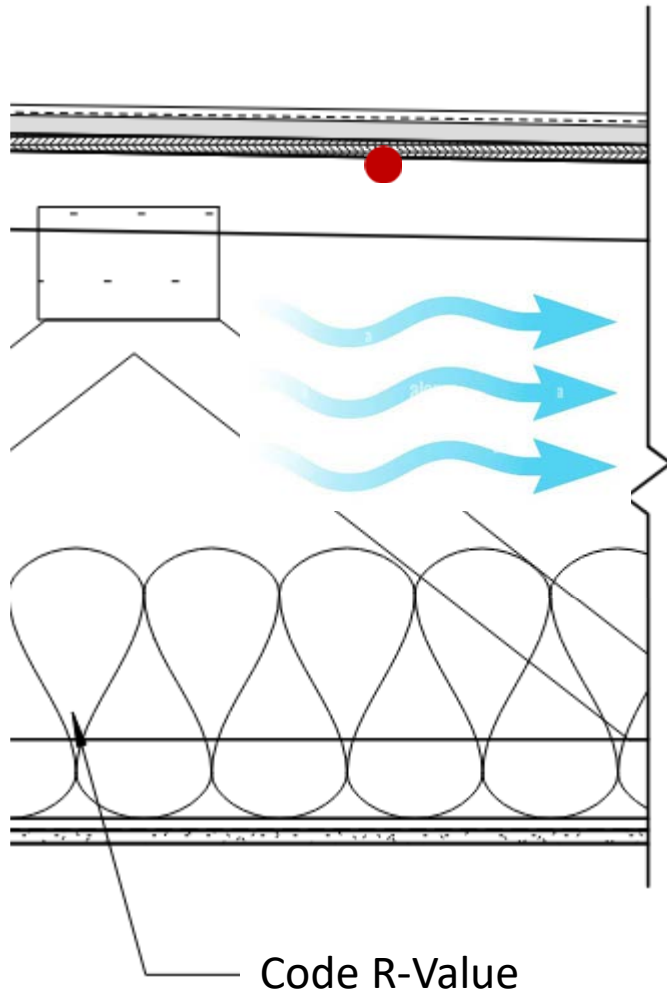








CZ 2A_Austin **Residential Roof** code min insulation levels:
Relative Humidity (RH) at Plywood Deck – Interior Side



Case 1: “Base Case – Code Min”

- Metal Roof, Air Gap, Self-Adhered Underlayment, Plywood Deck, Vented Attic, R-38 Fiberglass, gypsum ceiling

Case 2:

- R-25 polyiso above deck (best practice)

Case 3:

- 10” ocSPF below deck

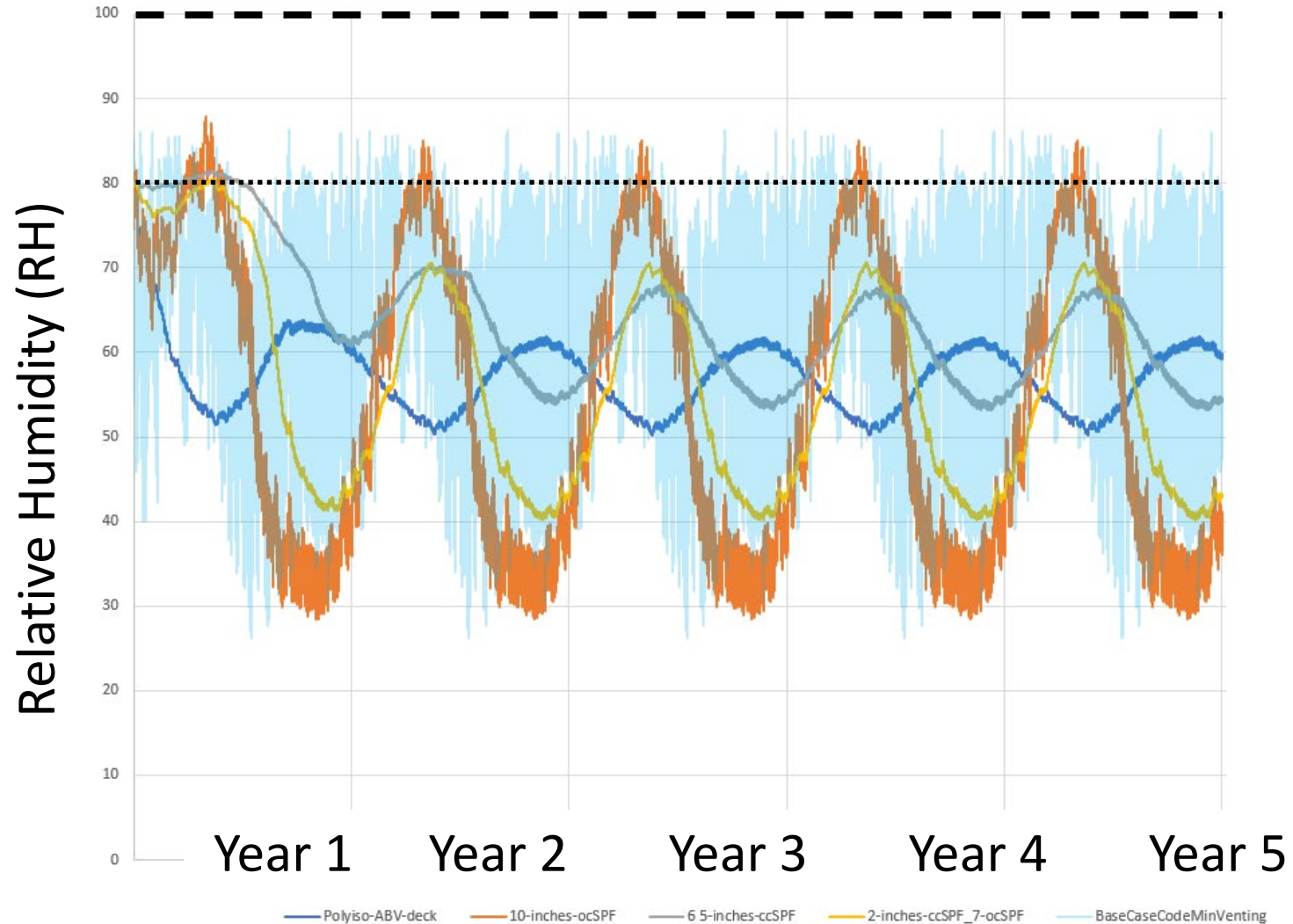
Case 4:

- 6.5-inches ccSPF below deck

Case 5:

- 2-inches ccSPF and 7-inches ocSPF (what I did!)

CZ 2A_Austin Residential Roof: Relative Humidity (RH) at Plywood Deck – Interior Side



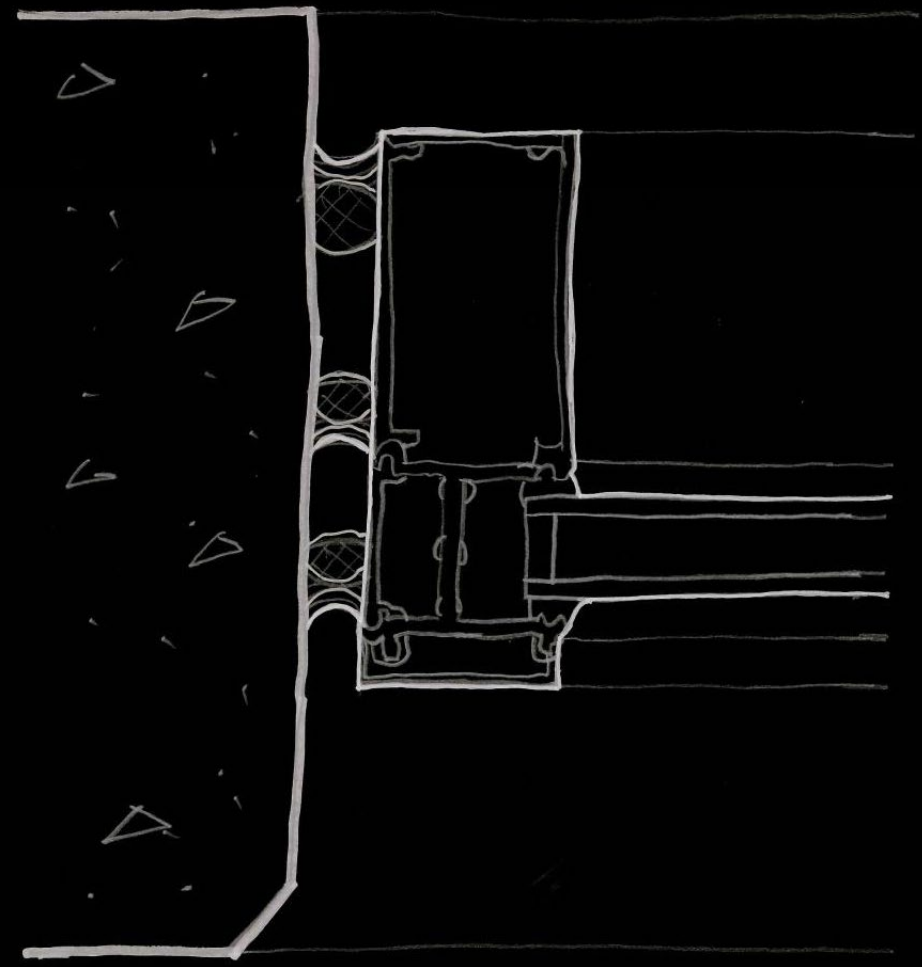
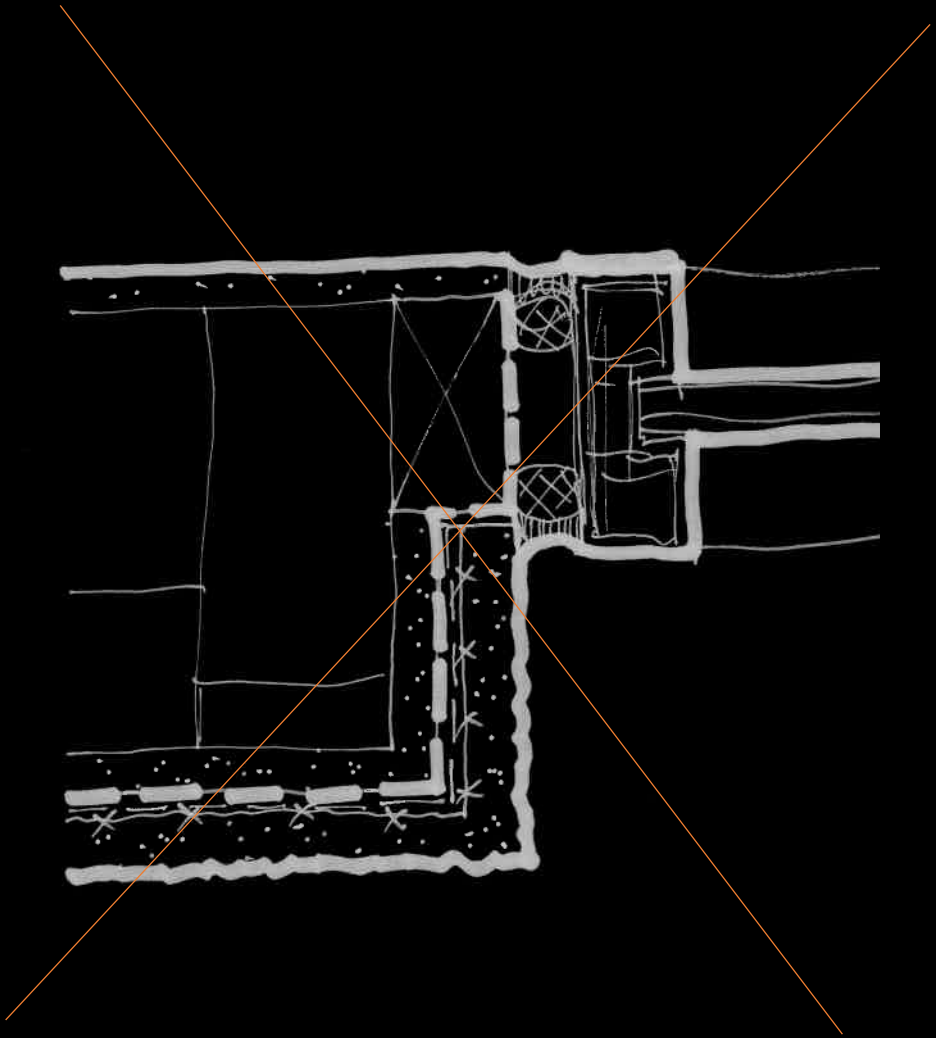
Vented roofs blow off more than unvented roofs. Vented roofs burn more than unvented roofs. Vented roofs are energy inefficient compared to unvented roofs. Vented roofs cause moisture problems south of the Mason-Dixon Line and east of Interstate 35 in Texas. Venting a roof in a hot-humid and mixed humid climate is a very, very bad idea.

- Joe Lstiburek, March 15, 2023 from ***Shakespeare Does Roofs***



Chapter 5

Redundancy



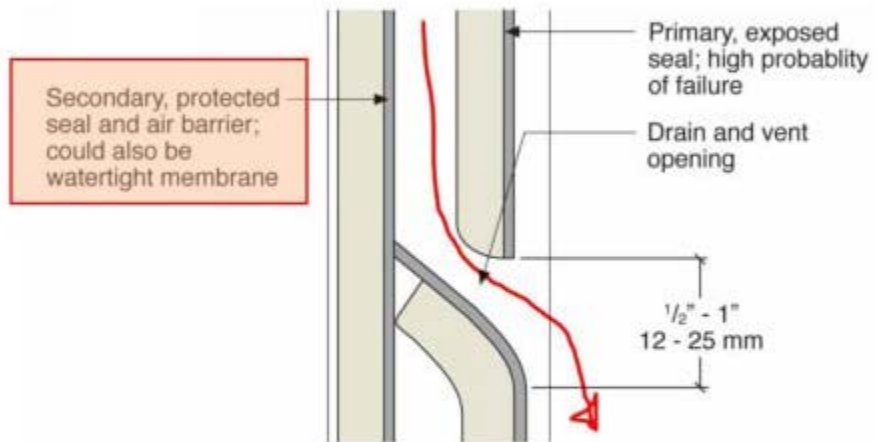
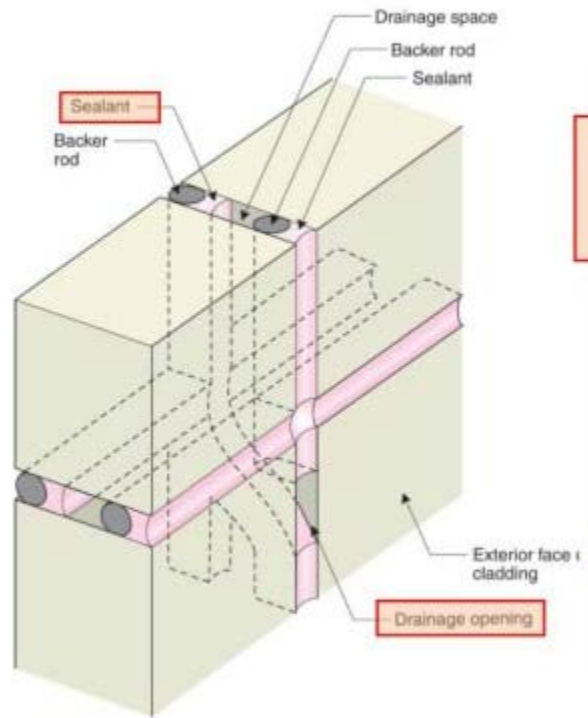


Fig A Details of two-stage joint at drain and vent hole. Note the open joint allows for easy drainage. Plastic weep tubes are sometimes inserted to alert trades that an opening is intentional and not to be sealed over, but such tubes do not drain as well.



Chapter 6

Water Managed vs. Barrier
Hydrostatic Pressure
& other sexy topics

Clad Your Buildings in Garbage



Bohlin Cywinski Jackson



Auburn Rural Studio



Trinity White Architecture





Chapter 7

Maintenance
First Cost
Life Cycles

The Multifamily Irony





Chapter 8

Performance

vs.

Style

The Polyester of Brick
- John Waters







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Wilbur B. Green

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Call Gilmore 5271—The FormStone Co., 200 S. Franklinton Rd. Balto. 23



[The Darkroom - Baltimore Sun FORMSTONE-27-A-DAVIS2.jpg](#)



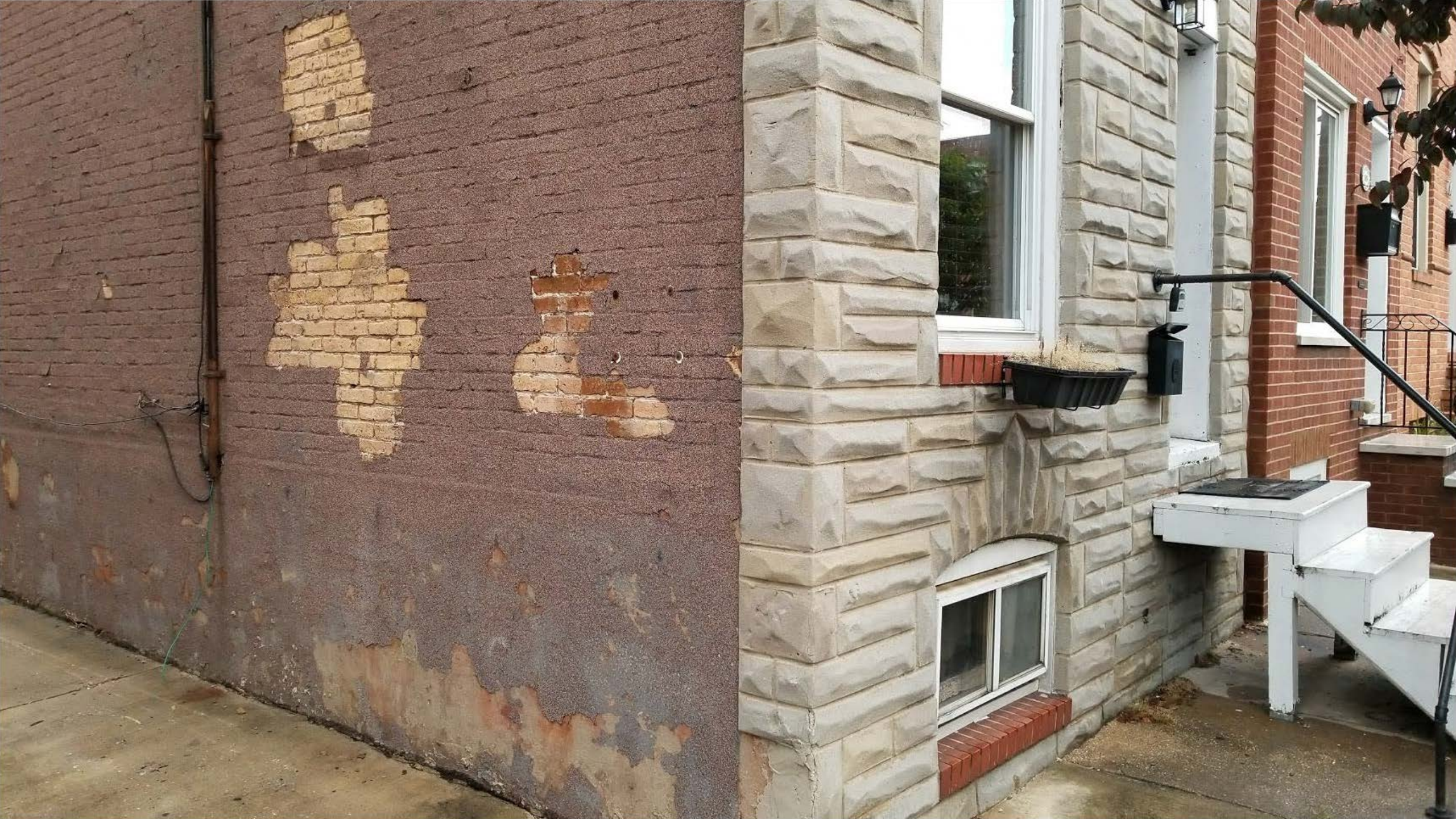
1905







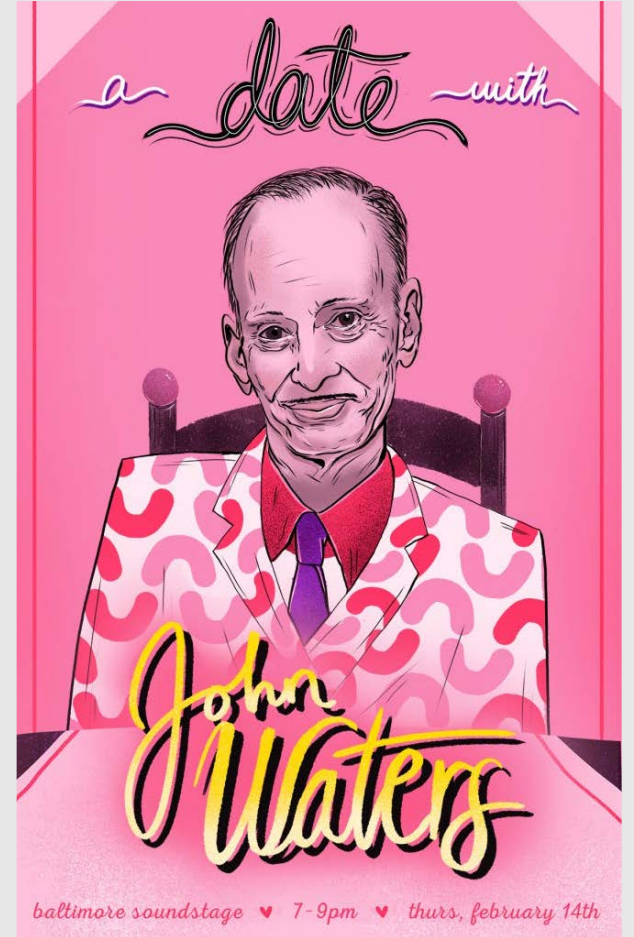








By Handwerker - Own work, CC BY-SA 3.0,
<https://commons.wikimedia.org/w/index.php?curid=18520152>





Chapter 9


Control Layers
&
Discontinuities

**Thermal-bridge
Free**

- $\Psi \leq 0.006 \text{ BTU/ hr. ft } ^\circ\text{F}$







*Drainable EIFS...
you are my
hero!!!*



How to design a 1000-year building

(really just design a 100-year building that performs really well)

1. Prioritize Performance (stop caring about style!)
2. Protect Structure, Overbuild Structure
3. Leave plenty of room for services capacity
4. Provide lots of storage
5. Invest less in finishes and more in structure, maintenance
6. Design for future change, adaptability

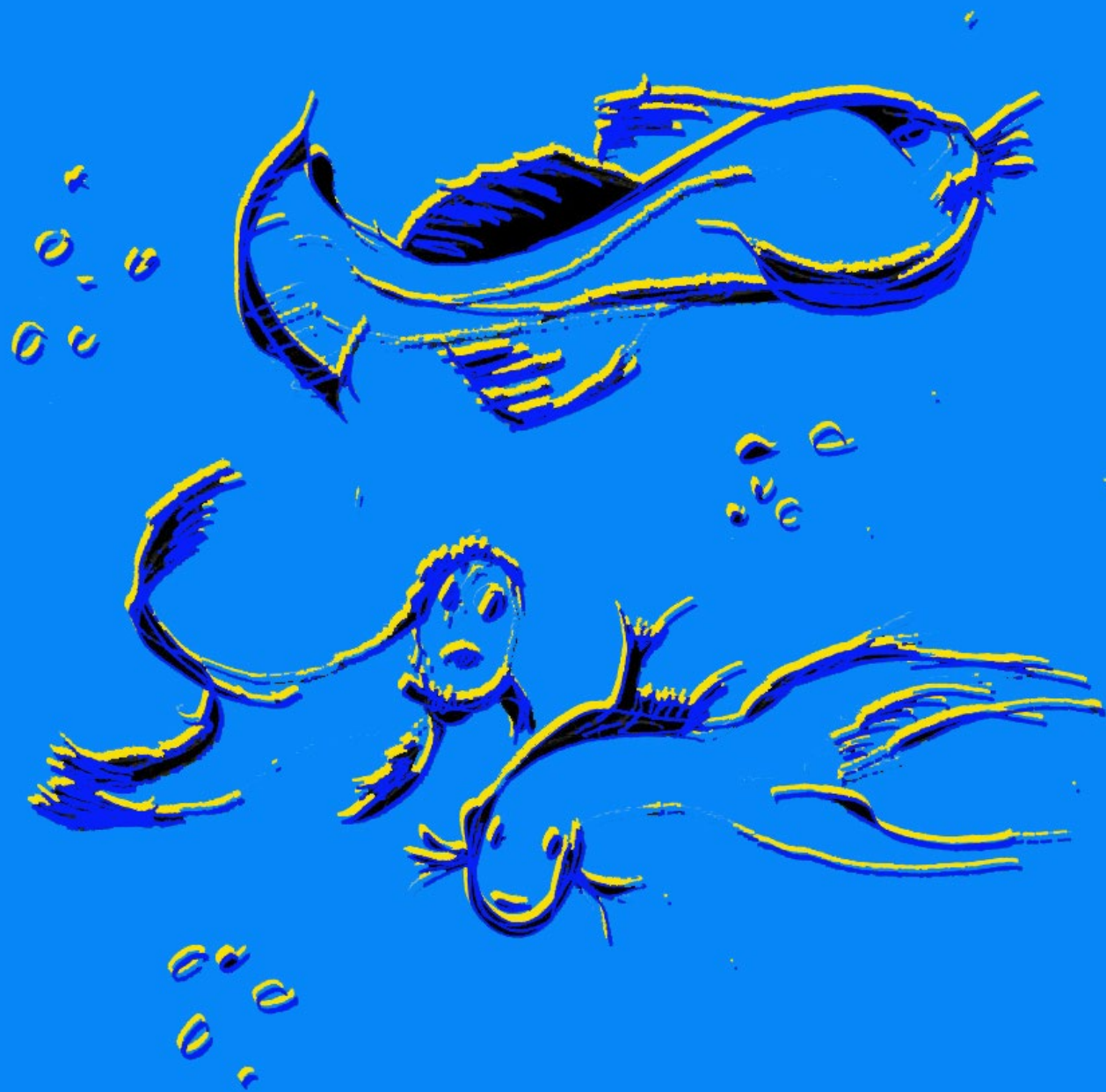


Chapter 10

Like Water

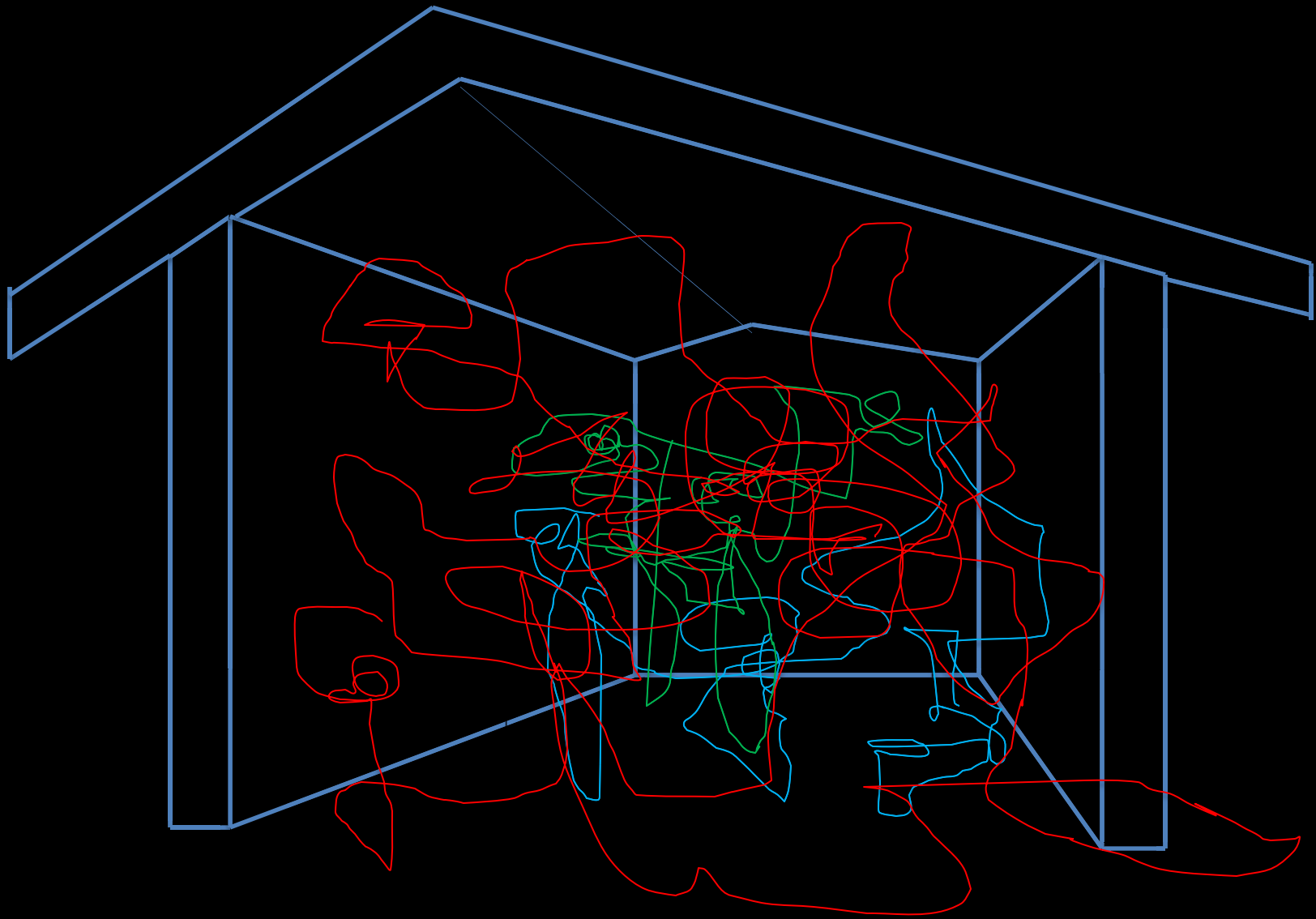
This is Water

- David Foster Wallace



Center for Advancement of
Public Action, Vermont
Tod Williams Billie Tsien





Keith A. Simon

keith.simon@salasobrien.com

512-800-4485

@buildingthoughts on instagram