

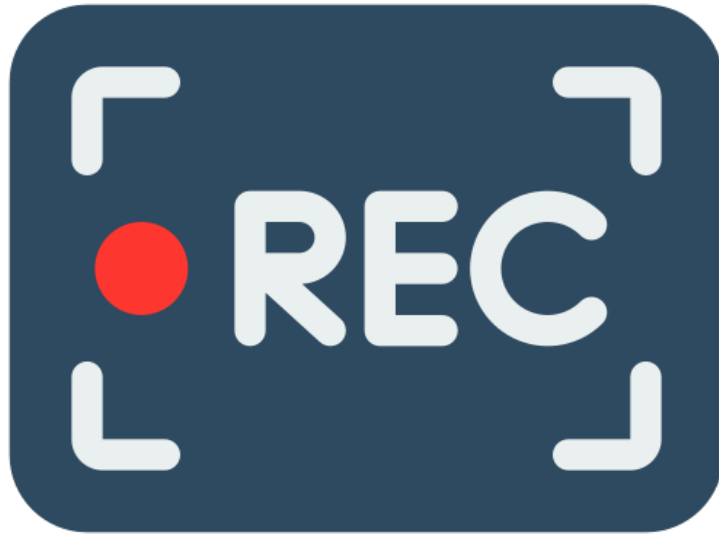
Deep Retrofit Discovery Session

ArtsHub Ortona Retrofit Journey

Over a century of history, and a future of opportunity. Lessons, challenges and successes from the ArtsHub Ortona retrofit

Sept 15 | 2:00 PM – 5:00 PM | Edmonton





This Session is
Being
Recorded.



Discovery Session Agenda

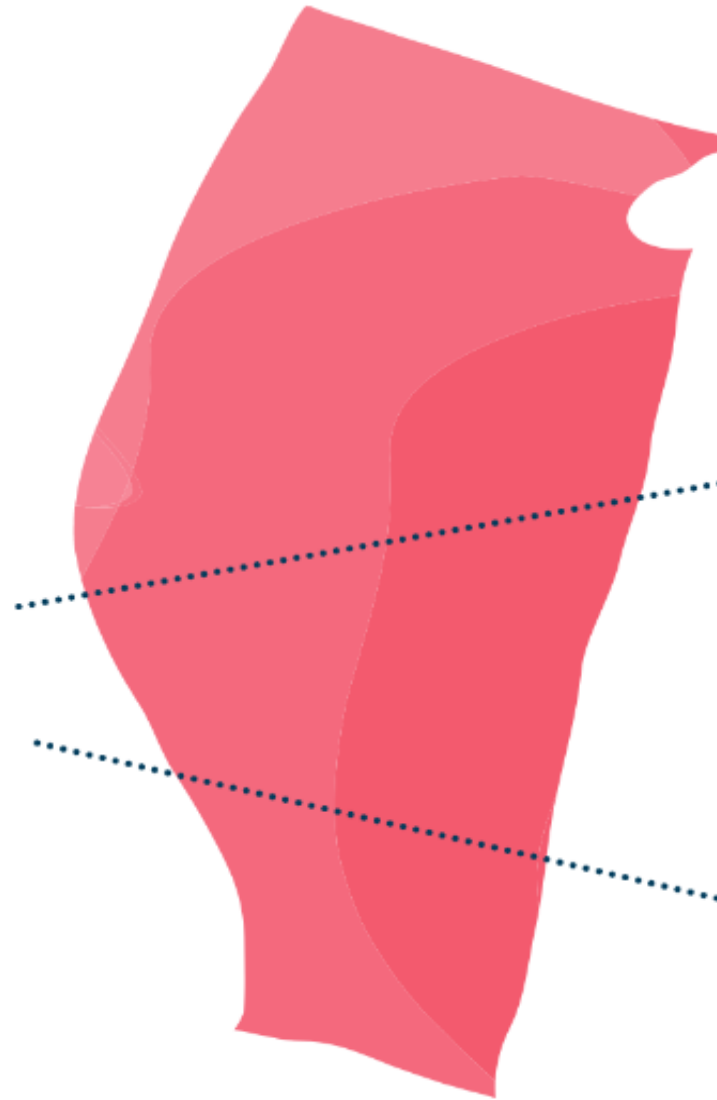
- **Welcome to Discovery Session #8**
- **Land Acknowledgement**
- **Alberta Ecotrust – Retrofit Accelerator Program**
- **SAIT Green Building Technology Access Centre**
- **Presenter Introductions**
- **Tour & Networking**
- **ArtsHub Ortona Team Presentations**
- **Question & Answer + Discussion**
- **Refreshments & More Networking**

TREATY 8

Signed in 1899

TREATY 7

Signed in 1877



TREATY 6

Signed in 1876



ALBERTA

ecotrust

Retrofit
accelerator

ABOUT

Our Buildings Initiatives



enbix

Retrofit
accelerator

THE PROGRAM

Retrofit Accelerator

The **Alberta Ecotrust Retrofit Accelerator** program is an initiative funded by Natural Resources Canada under the Deep Retrofit Accelerator Initiative (DRAI).

This program is also made possible from RBC Foundation's Tech for Nature program.

FUNDERS

Canada



NETWORK





GREEN BUILDING TECHNOLOGY ACCESS CENTRE

**DRAI: Retrofit Discovery Sessions
and Market Analysis**

GBTAC MISSION



- To prove, implement, and commercialize new building materials, systems and methods that lead to the construction or retrofit of buildings to be higher efficiency, lower emission, healthier, and more environmentally friendly.
- Collaboratively create and de-risk holistic high-performance building solutions to address environmental, social and economic realities.
- To develop and provide training and support systems to upskill the residential and commercial construction industries.

GBTAC DEMONSTRATION LAB



**Energy Management and
Renewable Energy Integration**



**Advanced Building and
Material Science**



**Environmental and
Architectural Ecology**

GBTAC DEMONSTRATION LAB



Environmental Weathering Chamber



E72 Structural Testing Apparatus

RETROFIT DISCOVERY SESSIONS

- Free educational and networking sessions.
- Foundational information and Case Studies for deep energy retrofits in Part 3 buildings in Alberta.



8 Discovery Sessions:

- 3 In-Person sessions in Calgary
- 3 In-Person sessions in Edmonton
- 2 Online sessions
- Past recordings on **ENBIX** Resources:
 - <https://enbix.ca/resources/>



Past Discovery Session Topics:

- Demystifying Deep Energy Retrofit Financing (Part 3 Bldgs.)
- Alberta's Commercial Retrofits in Action:
 - Dominion Centre (Calgary), WSP Building (Edmonton), Edmonton EXPO Centre, MacKimmie Tower (U of C), Hi-Tech Seals Building (Edmonton), Glenbow Museum
- Commercial Deep Retrofit Research Findings:
 - Training Programs Database, Regulatory, Market Incentives

MARKET AND GAP ANALYSIS

01



Training Needs Identification
(building owners, industry professionals, and policymakers)

Identifying skill building needed, accessible training, gaps in available training.

02



Learning from Other Jurisdictions

Identifying best practices and lessons learned that can be applied to Alberta's program.

03



Financial Needs Assessment

Collection of data to quantify the need for financial support and incentives.

04



Code and Regulatory Impact Analysis

Understanding impacts that support or create barriers for retrofit projects.

05



Barriers and Risks to Accelerating Retrofit Activity in the Alberta Market

Identify potential opportunities for made in Alberta solutions, (including supply chain identification and technology options for local market).

Presenter Introductions



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Tour & Networking



Presentation



**Ortona Armoury
Retrofit Discovery Session**

1914
East and South Wings Constructed



1914-1924
Hudson's Bay Company

1938
North Wing Constructed



1924-1927
Edmonton Pure Butter Co.

1928-1939
National Trade School



1939-1941
Department of National
Defence

1941-1964
HMCS Nonsuch

1964-1977
Loyal Edmonton Regiment
3rd Battalion

1977-1983
Public Works Canada

1977-1983
National Film Board

1977-1978
Commonwealth Games
Federation

1979-1988
Ortona Gymnastics Club

2004
Historic Designation
Sandstone Cartouches Reinstated



1996-2019
Ortona Armoury Tenants
Association

2024
Arts Hub Ortona





**Heritage
Conservation**



**Code
Compliance**



**Envelope
Improvements**



**Mechanical System
Renewal**



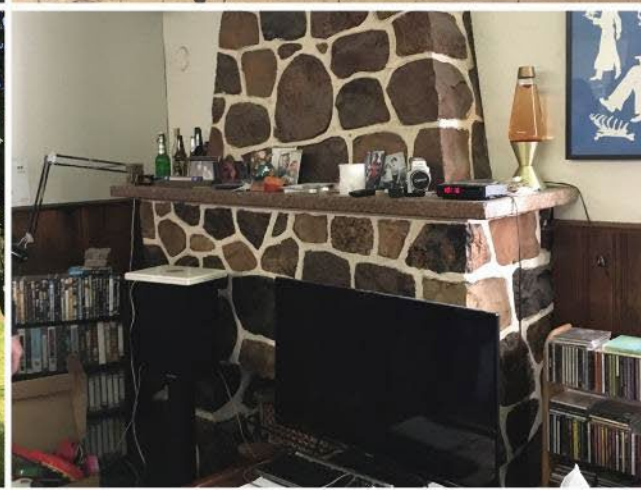
**Lighting & Electrical
Enhancements**



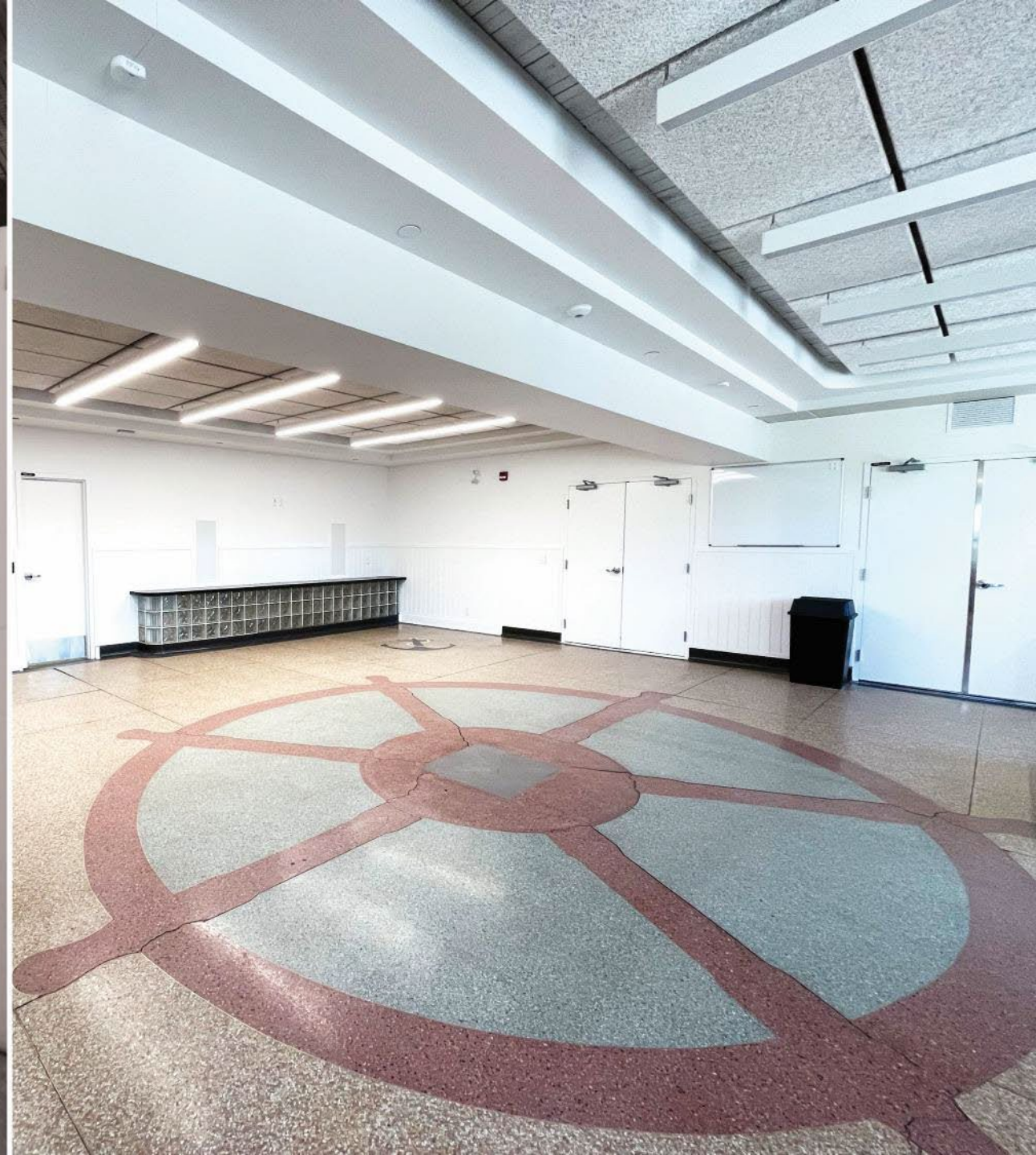
**Construction
Logistics & Strategies**



Heritage
Conservation







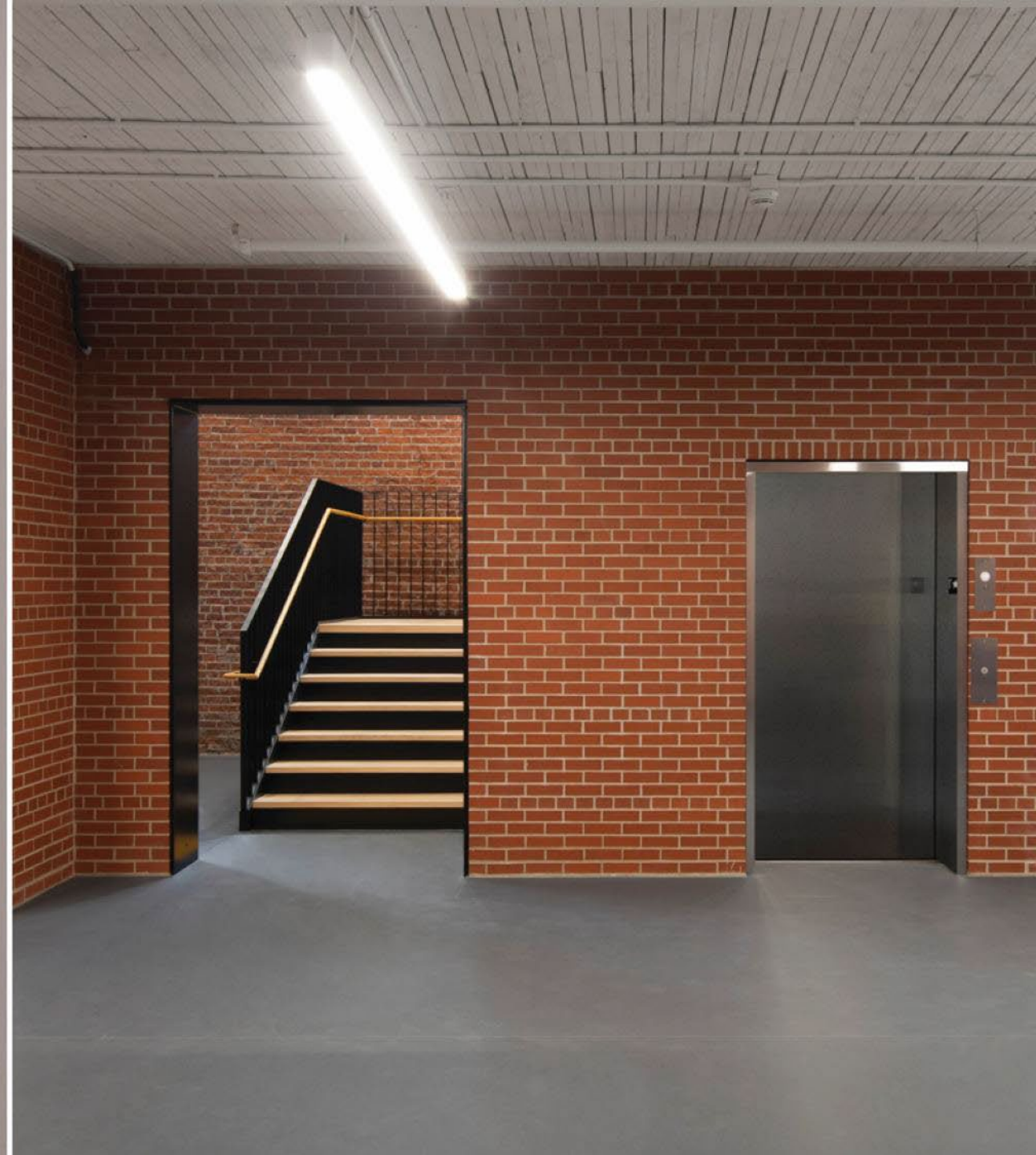






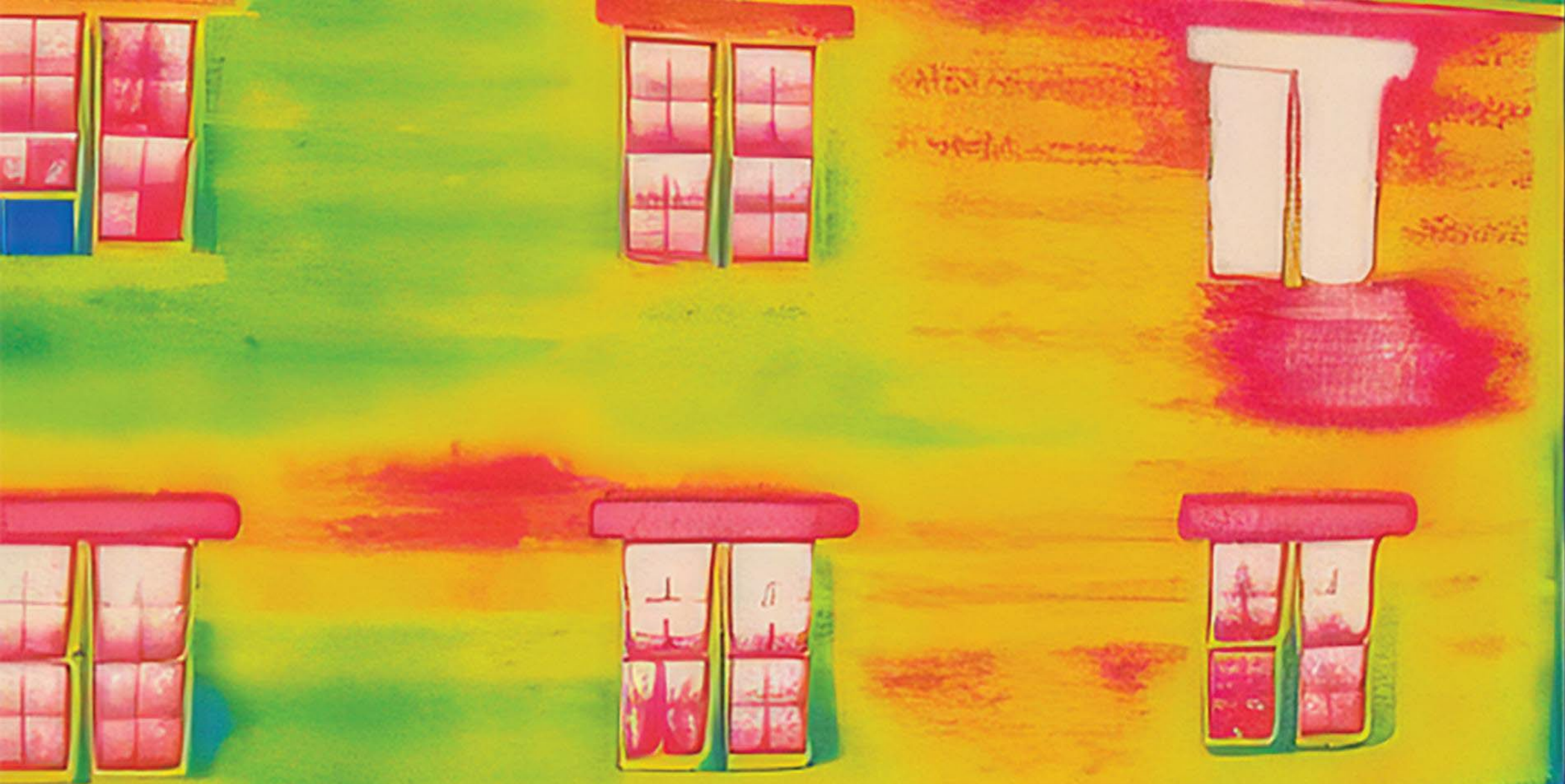
Code
Compliance











Envelope
Improvements









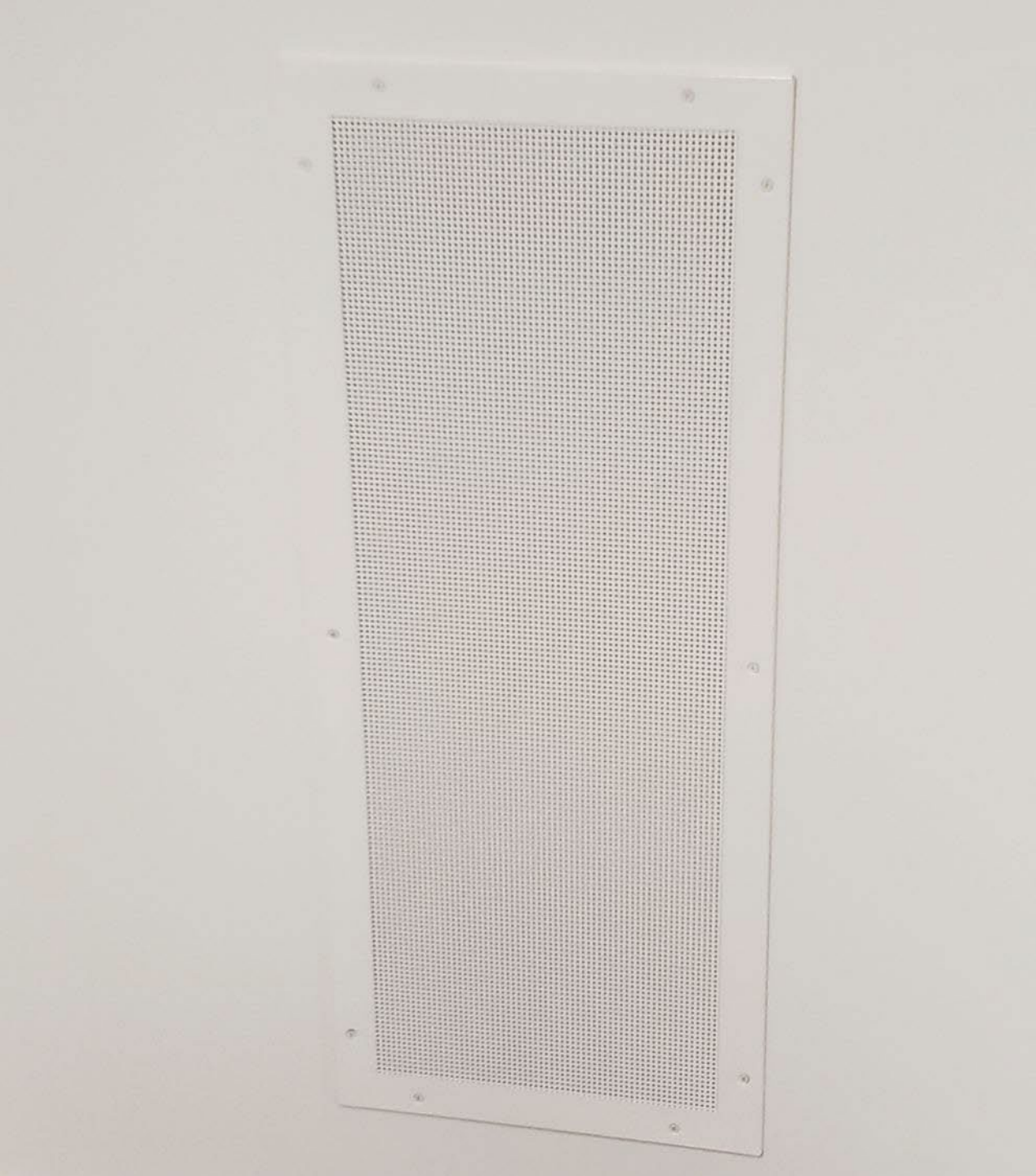
Mechanical
System Renewal











The image shows a modern interior space with a high ceiling featuring exposed wooden beams and trusses. The walls are primarily white, with one section covered in small, light-colored square tiles. A brick wall is visible on the left, with a window integrated into it. The floor is made of light-colored wood. The lighting includes recessed ceiling lights and track lighting. The overall aesthetic is industrial and minimalist.

**Lighting & Electrical
Enhancements**



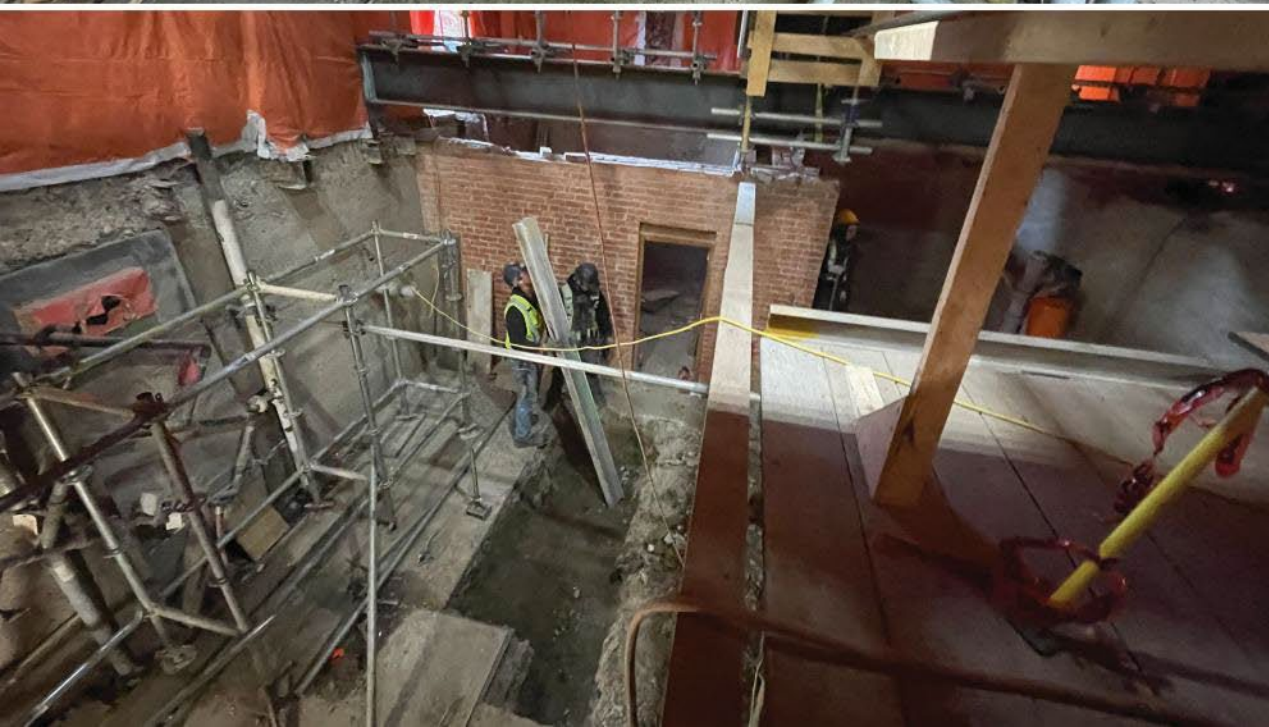






**Construction
Logistics & Strategies**









FORM & BRACE WALL, POUR SOLID WITH 6" THICK FILLCRETE TEMPORARILY WHILE (1) IS BEING EXCAVATED/POURED.

REMOVE FORM FOR (2), REMOVE FILLCRETE, EXCAVATE & POUR CONCRETE

REMOVE FORMS FOR (3), REMOVE FILLCRETE, EXCAVATE AND POUR CONCRETE

EXCAVATE A CAVITY BETWEEN (1) AND (2) AND POUR WITH FILLCRETE TO STABILIZE CLAY WALLS OF (2) DURING EXCAVATION OF (1)

50mm NON-SHRINK GROUT BETWEEN CONCRETE UNDERPINNING & EXIST STRUCTURE

POUR (1) APPROX. 4-6" UNDER BRICK WING WALL FOUNDATION

40"

44-46"

2

54"

54"

1

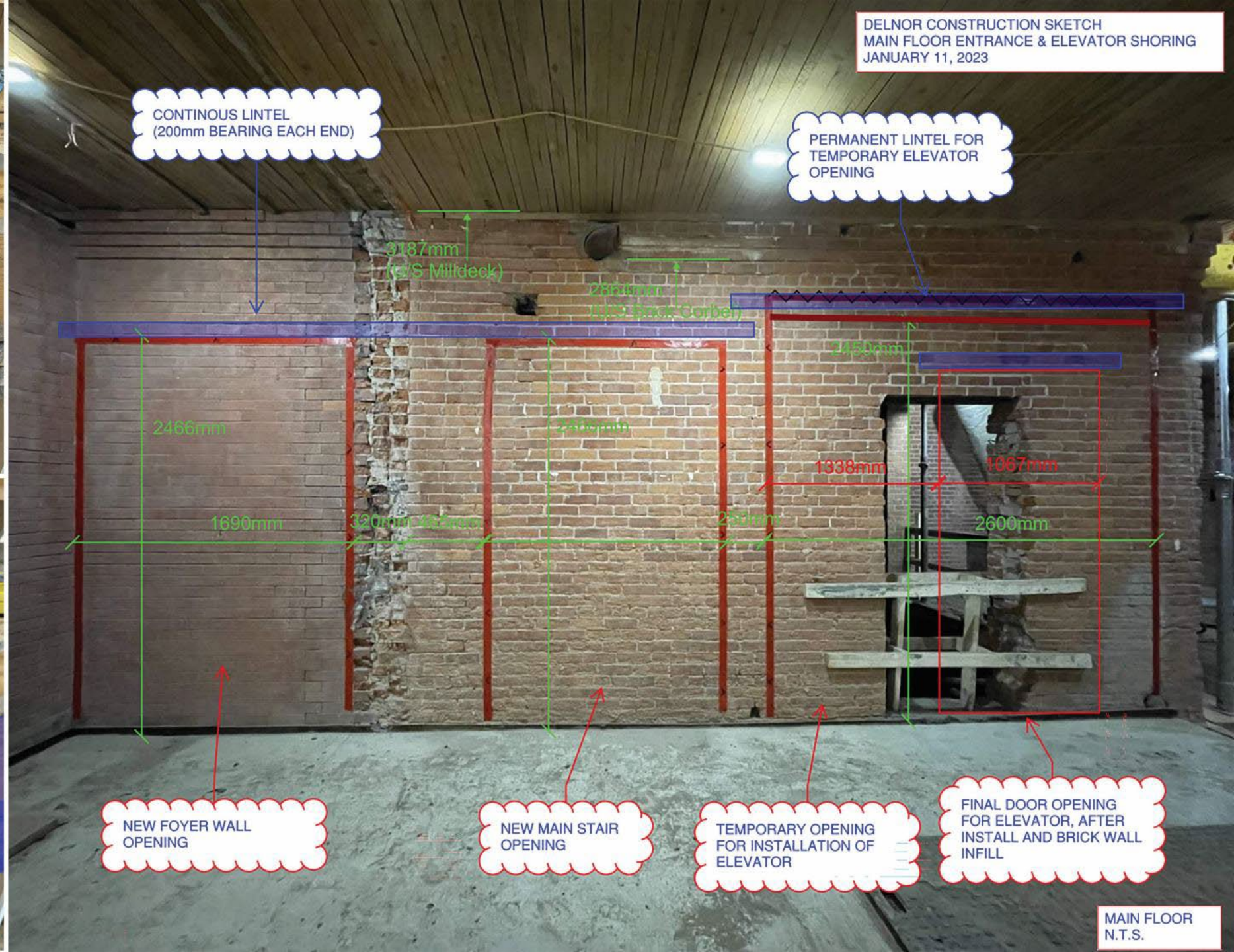
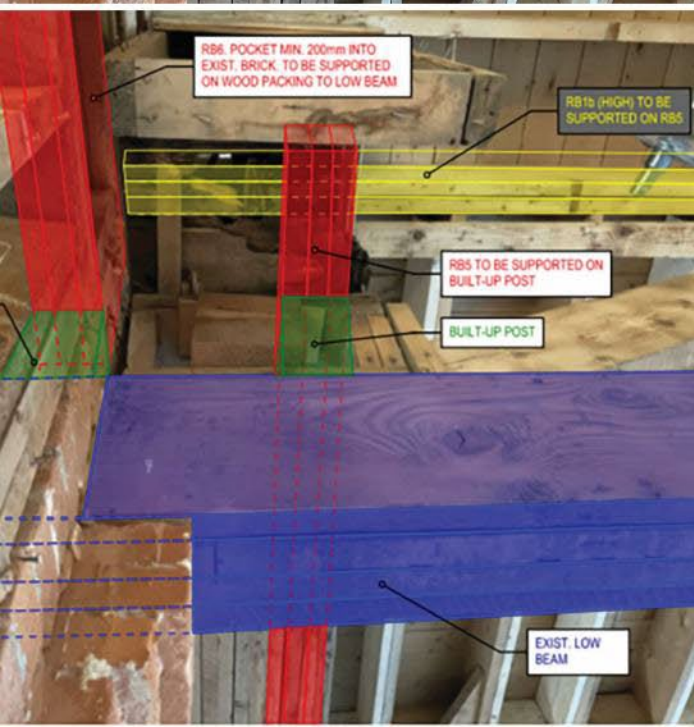
3

UNDERPIN AS REQUIRED BASED ON EXCAVATION DEPTH. REFER TO SSK-9.1 - 9.3 FOR MORE DETAILS

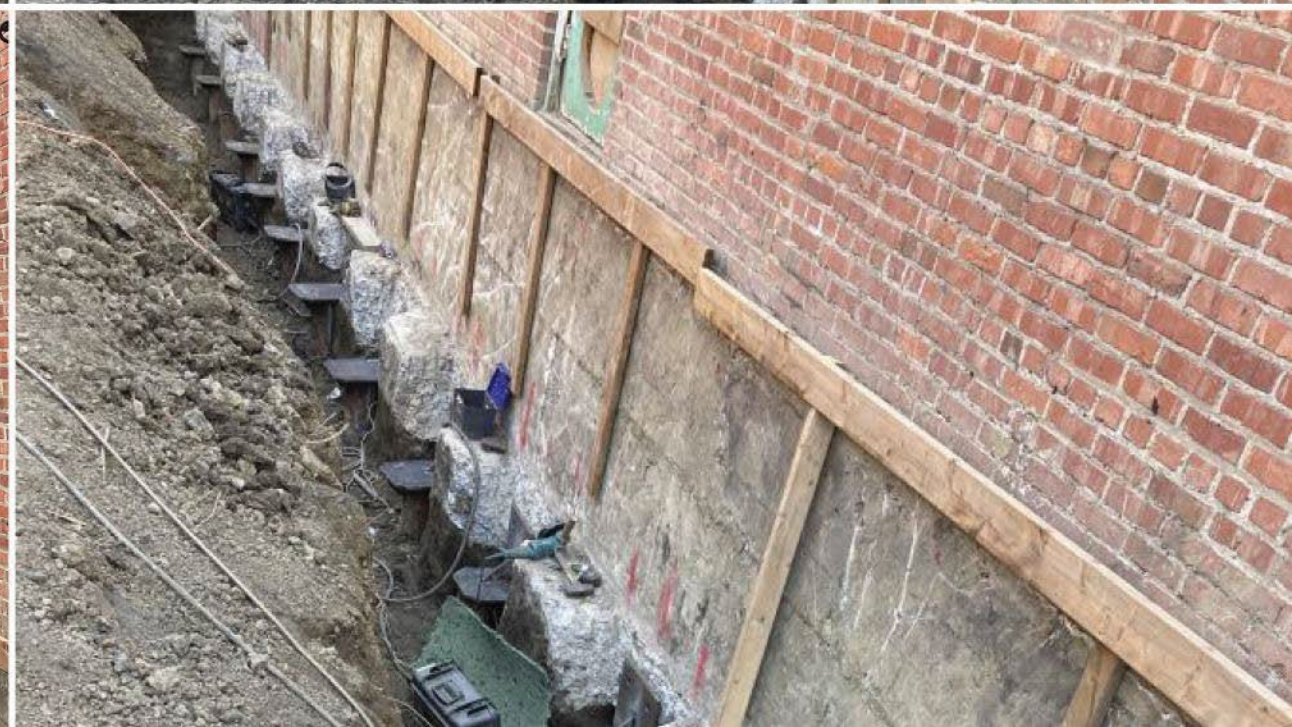
3

DEPTH OF EXCAVATION FOR ELEVATOR PIT MUST EXTEND TO ADEQUATE SOIL WITH MINIMUM FACTORED BEARING CAPACITY OF 125 kPa AND MINIMUM ALLOWABLE BEARING CAPACITY OF 85 kPa AS PER GENERAL NOTES.





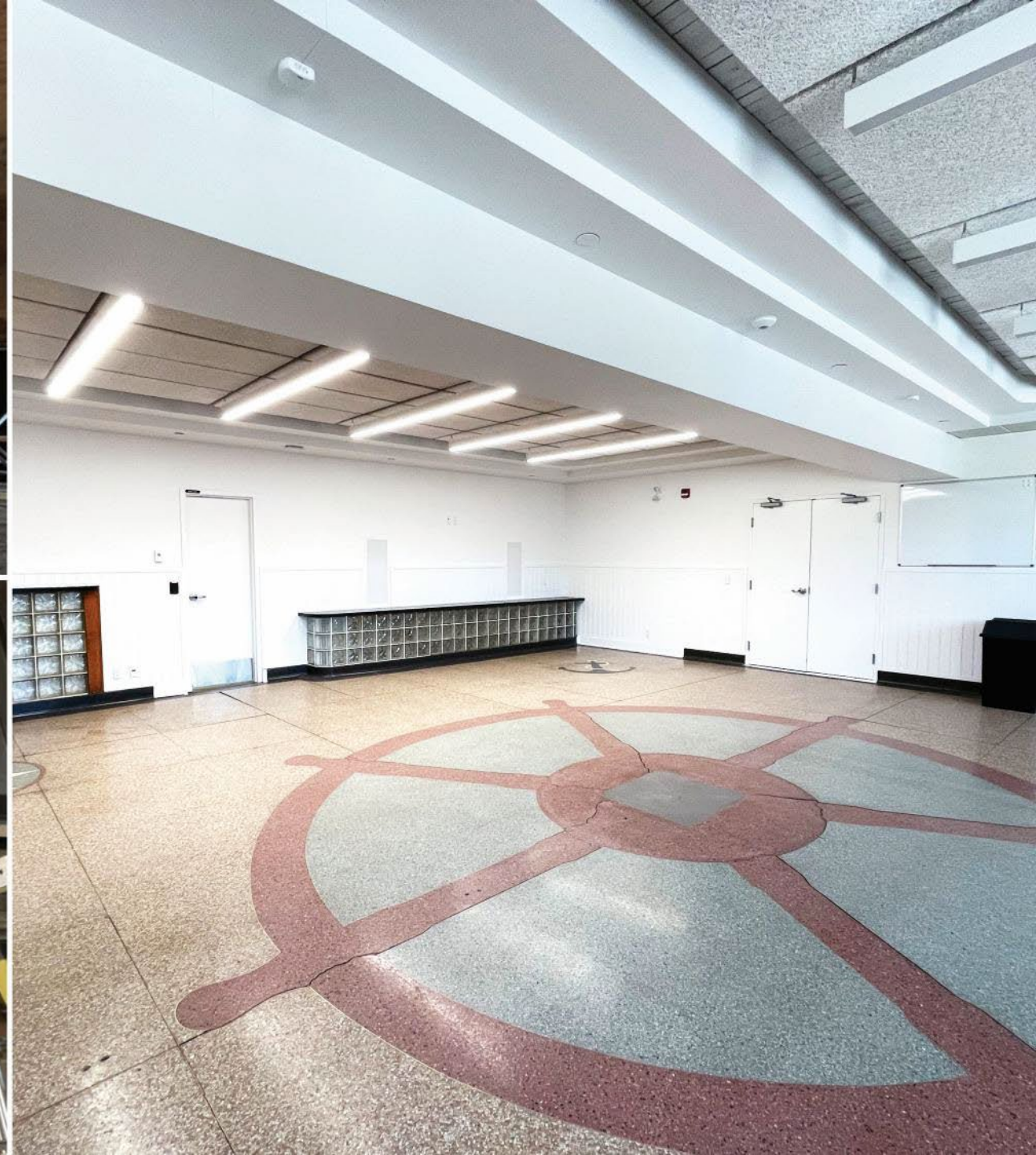










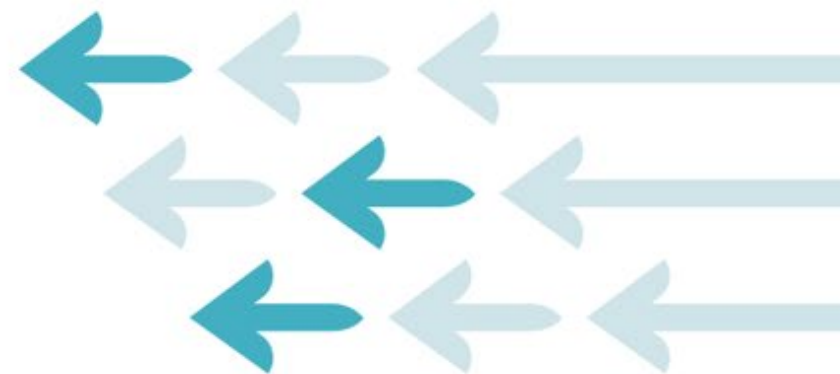


Thanks!



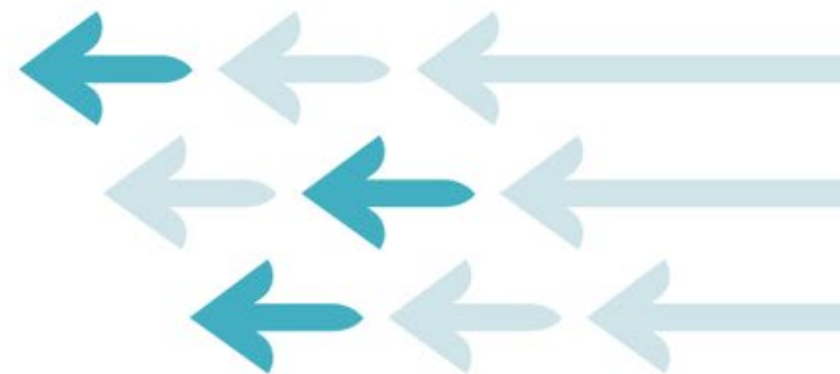


Q & A Panel Discussion

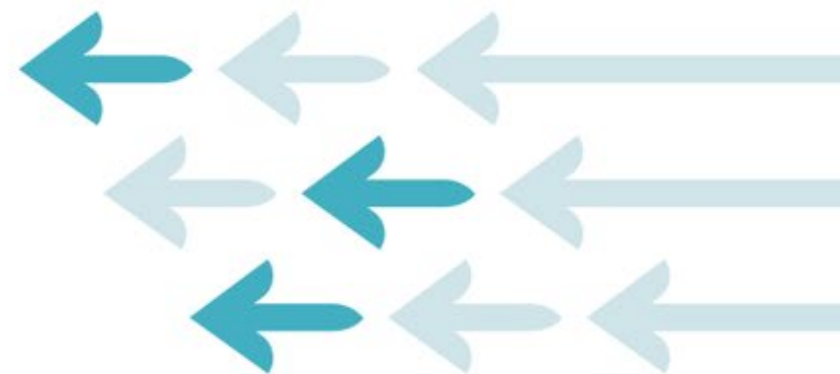


For heritage building upgrade projects, is there a tension between preserving historic authenticity and achieving targeted energy efficiency goals?

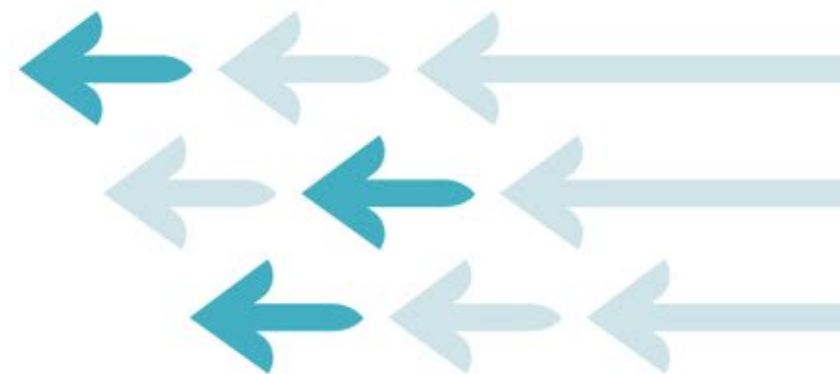
If so, how should project teams navigate this balance?



Where do you see the biggest misalignment between Code & Policy requirements and practical feasibility, as related to heritage building retrofit projects?

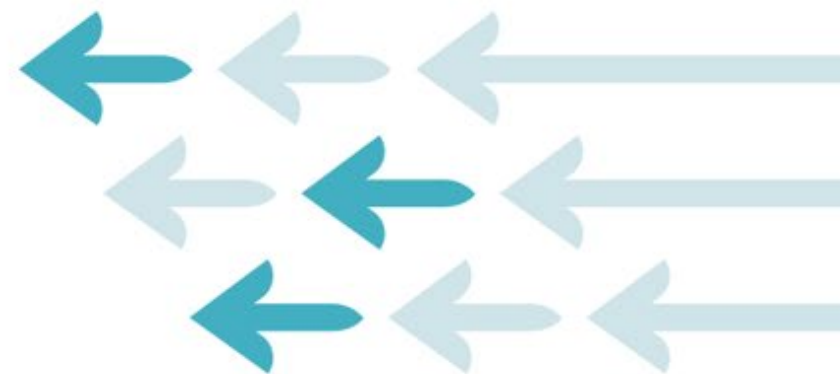


If a heritage building owner is considering a retrofit project today, what is the single most important piece of advice you would give them before they begin their journey?



Based on your experience, what are the key barriers and challenges that building owners face when considering more progressive upgrades, such as a deep energy retrofit?

Ex) Financing? Codes and regulations? Technologies? Methods? Skilled workforce? Other?



Beyond existing incentive and loan programs (such as CEIP), what role should municipal, provincial and federal governments play in accelerating heritage & existing building retrofits?

Thank You



ALBERTA
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Retrofit
accelerator

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SAIT

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