TOWARD INTEGRATION: Collaborative Architecture and Design Methods

Thesis proposal for a

Fargo International Market & Food Co-op

Zach Mathern

Food Co-op

Grocery
Deli
Education

\+

An integration of processes, people, and experiences

International Market

Retail shops
International foods vendors

Whole Foods Co-op
Duluth, MN

Midtown Global Market
Minneapolis, MN

ARCH 772 Design Thesis

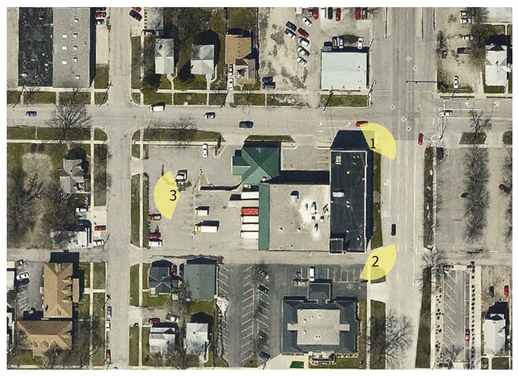
Thesis Advisor: David Crutchfield

Software:
AutoCAD Architecture 2011,
InDesign CS5, Photoshop CS5, Render[in],
Revit Architecture 2011, SketchUp 8 Pro

FORMER FARGO LAUNDRY CO. BUILDING, 1002 1ST AVE. S. FARGO, ND

Site/Context

1 2



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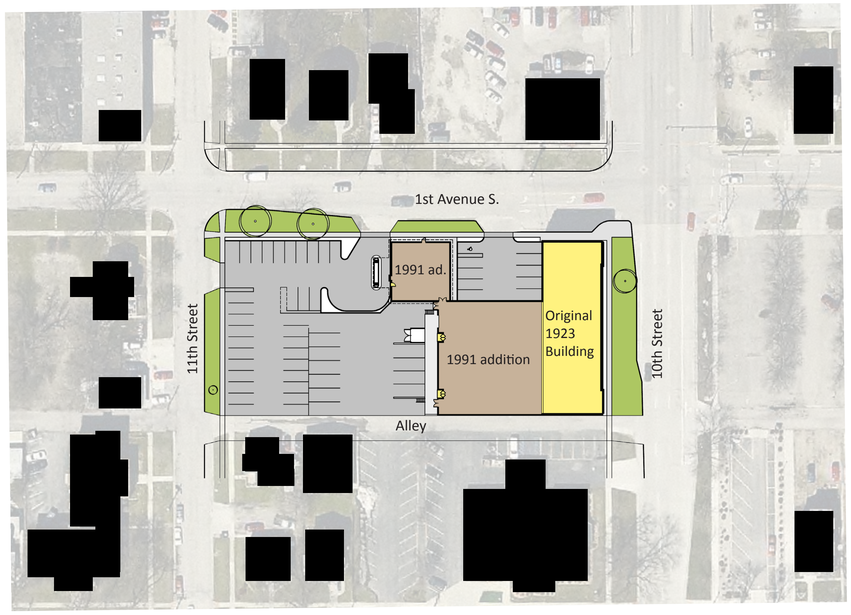
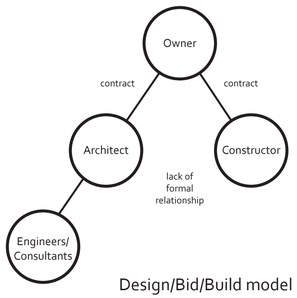


Problem Statement

What are the implications of architecture delivery models on the access to and propagation of quality architecture?

Research

Current architectural delivery models lack in communication, sharing, and accountability (such as design/bid/build).

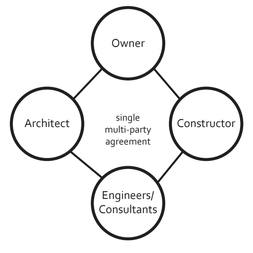


Design/Bid/Build model

Integrated Project Delivery as a formal collaborative process is successful by

- Involving key participants early
- Intensified Planning and goal definition
- Collaborative and Open communication

Technology and Building Information Modeling (BIM) enable further collaboration of key participants, by allowing participants to develop one model, virtually merging the buildings parts to create a cohesive and resolved model.



Integrated Project Delivery model

Forming Conclusions

Integration of people and process produces further developed and integrated architecture, and therefor higher quality results.

meaning...

- less waste
- better coordination of complex issues and details
- shared success and failure

and

collaborative innovation

SITE PLAN
Scale: 1/16" = 1'-0"

DELI / CAFETERIA BEYOND

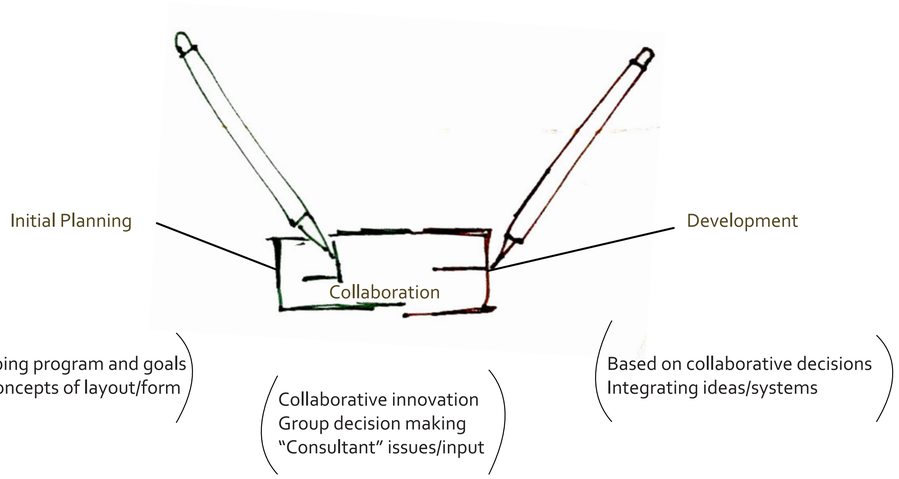
CAFETERIA / INTERNATIONAL FOODS VENDORS

NORTH ENTRANCE / BUS STOP

ENTRY / RETAIL SHOPS / RAMP / LEARNING KITCHEN

OPEN CORRIDOR / PRODUCE

Process



Initial Planning

Collaboration

Consisting of a working session with Chris Hawley of Stahl Meland Hawley Architects & Builders, chosen for a balance of architectural design, contracting, and collaborative process experience.

Structure

- Columns on same grid pattern as existing
  - Reference historic pattern or set new grid
  - Separation between old/new
- Material
  - Steel (new) vs. Wood (existing)
  - Masonry bearing different from existing CMU (economical)

Mechanical

- HVAC to new and exsiting
  - Use horizontal beam/soffit between old and new for chase
  - Split to each side

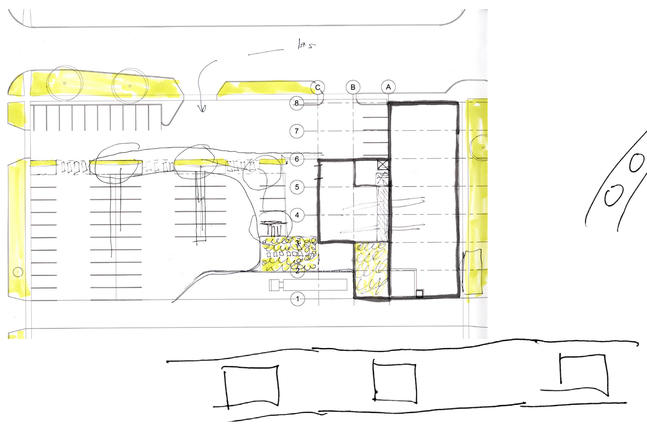
Site/ Circulation

- Main floor 5' above grade
  - Bring people up some first on site, some interior
  - Stepped parking/Nodes of landscape
- Circulation Systems
  - Group elevator/escalator systems when possible

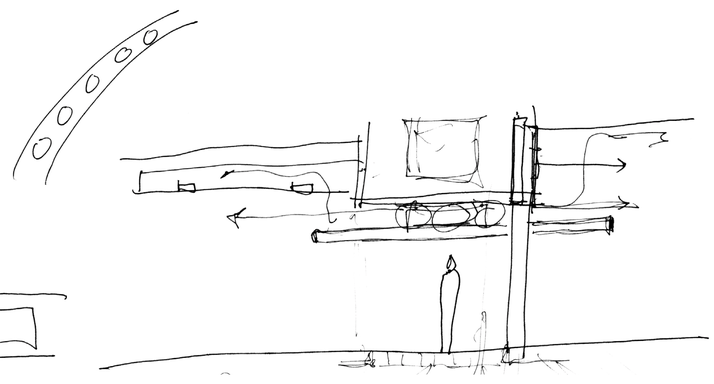
Design/ Form/ Materials

- Connection to historic building
  - Offset from existing (reveal)
  - Make rule about connection i.e. never touch new brick to old
- New Entry
  - Accentuate new entry/ make apparent
  - Canopy/Axis

Collaborative Sketch Ideas



SITE SKETCH

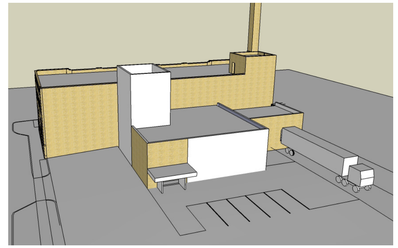


STRUCTURE/MECHANICAL/SPACIAL SKETCH

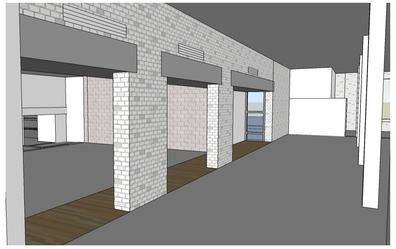
Development

Quick visualization of decisions from collaboration

Reveal/offset bridging new and existing

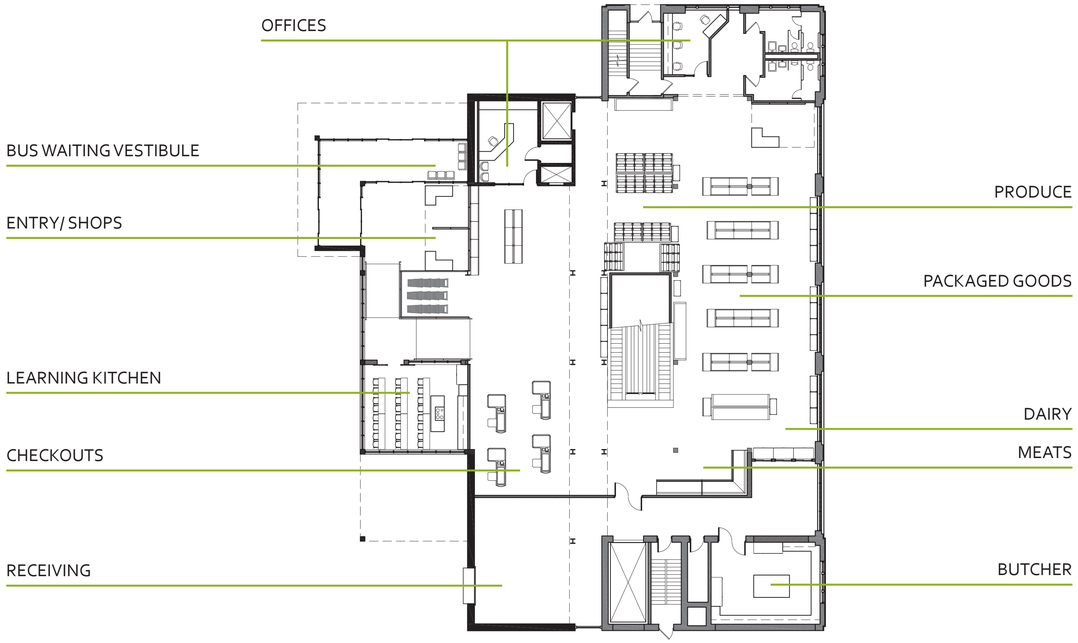


Material contrast and replication

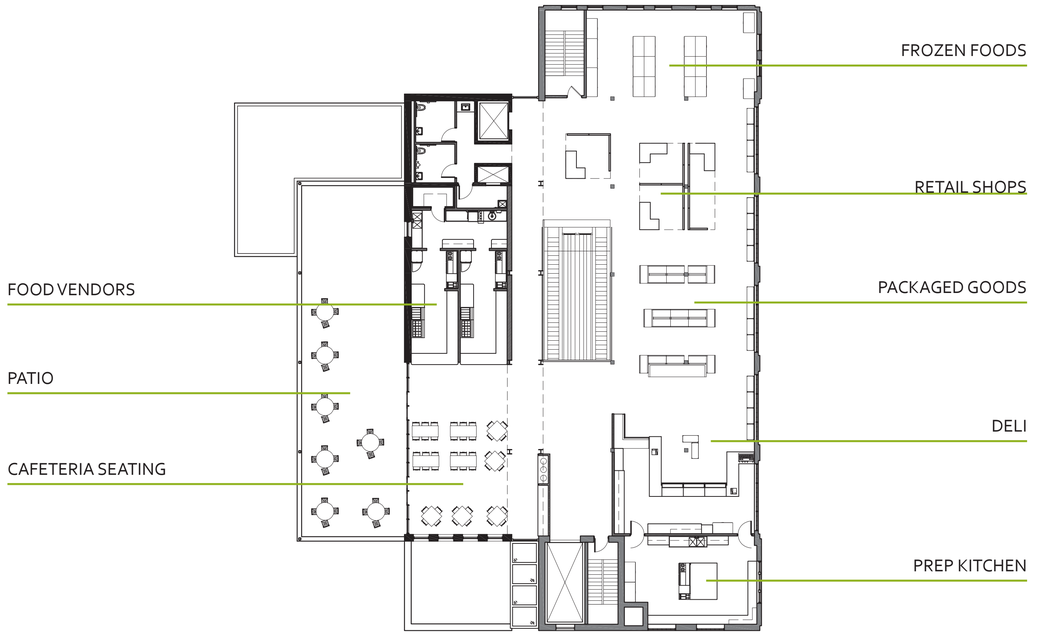


Soffit/mechanical chase between new/existing

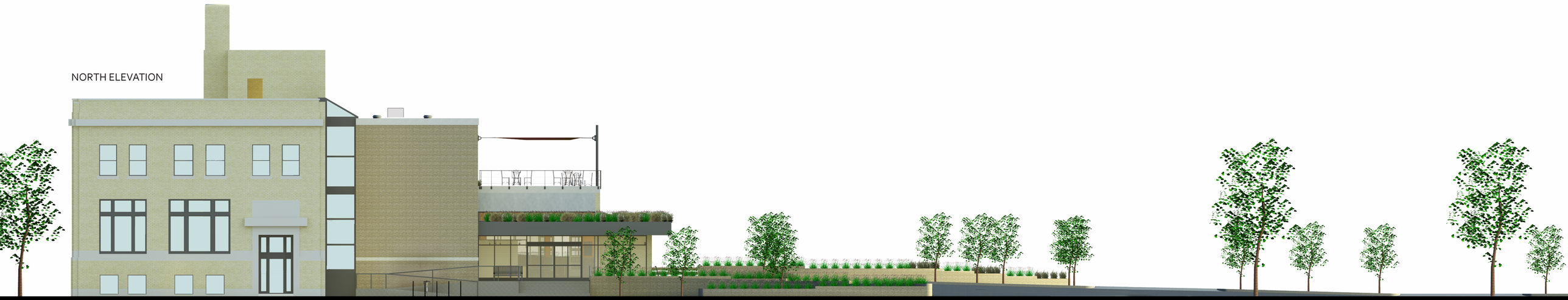
CONCEPT RENDERING



MAIN LEVEL FLOOR PLAN
Scale: 1/16" = 1'-0"



SECOND LEVEL FLOOR PLAN
Scale: 1/16" = 1'-0"



Structural/Mechanical/Circulation Corridor

The bridge between new and historic construction provides a chase for mechanical piping, material transition from new building to old, and natural daylighting.

International Foods

Guests can stop for lunch, with a choice of two international foods vendors and the co-op deli, in a bright informal cafeteria.

Outdoor Seating and Market Space

Canopies provide shading and color for a pleasant outdoor environment to eat and support outdoor market events.

Learning Kitchen

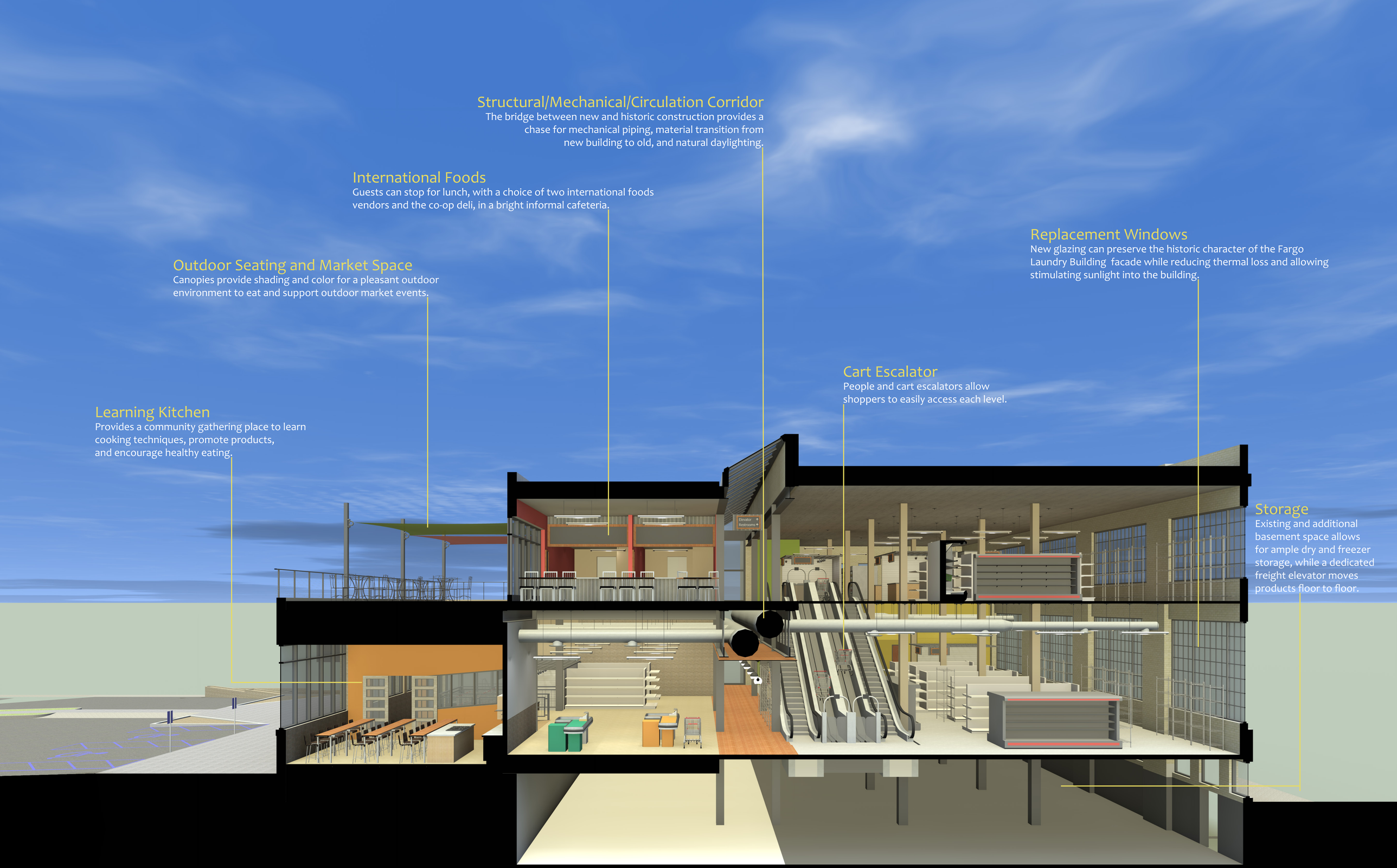
Provides a community gathering place to learn cooking techniques, promote products, and encourage healthy eating.

Cart Escalator

People and cart escalators allow shoppers to easily access each level.

Replacement Windows

New glazing can preserve the historic character of the Fargo Laundry Building facade while reducing thermal loss and allowing stimulating sunlight into the building.



Storage

Existing and additional basement space allows for ample dry and freezer storage, while a dedicated freight elevator moves products floor to floor.