

# PuR-POSe of Existing Building Codes

The purpose of these provisions is to **encourage the continued use or reuse of legally existing buildings and structures**... Compliance with these provisions shall be deemed to meet ... code.

International Code Council

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**P**redictable

u

**R**ehab –

**P**roportional to

**OWNER's**

**S**cope

e

# PuR-POSe of Existing Building Codes

*“Because developers and owners  
couldn’t predict with certainty  
what would be required to rehab a  
building, projects that posed the  
greatest uncertainty **weren’t  
attempted & remained unused.**”*  
*New Jersey Sub-Code adoption.*

Compliance with New Codes

IEBC Required Compliance Falls SHORT of New Construction Requirements Above

No Permit Required  
Permit Required

OBJECTIVE &  
PROPORTIONAL  
(to Scope of Work)  
COMPLIANCE

Existing Condition

Intensity and / or Size of Project Increases from Left to Right

# Benefitting Landmark Buildings



Use IEBC to Protect important historic details

# PuR-POSe of Existing Building Codes

“The repair, alteration, addition to and change of occupancy in existing buildings **are** ~~in many cases~~ more complicated to design and regulate than construction of new buildings.”

*ICC Building Code Administration 4<sup>th</sup> edition 2012 with my strikeouts*

# PuR-POSe

## Code Compliance Paths

### ICC - Commercial Code (allows for 6 compliance paths)

#### 1. IBC New Building Compliance

- **IBC Modifications & Alternatives** Section 104.10, & 104.11

#### 2. IEBC - has 4 paths as well (See Scoping Chapter 03)

- **Repairs** Solely Chapter 04
- **Prescriptive Compliance** Solely Chapter 05
- **Work Area Compliance** Chapters 06-11 in conjunction
  - **Plus Preservation Exceptions** Chapter 12
- **Performance Compliance** Solely Chapter 13  
(formerly IEBC chapter 14 and chapters 32/34 IBC)



# Existing Building Code Methodology Comparison

**Assembly (Library) changed to a Business use**

**Existing Conditions**

- Unsprinklered Bldg.
- Compliant Alarm System
- Reduction in Use Hazard
- Full accessibility

A-3 Use to B Use		Upgrades required
<b>Prescriptive</b>	Change to lower hazard	Nothing required of existing ✓
<b>Work Area – Alt Level 1</b>	Change Occ	Thresholds
		Handrails per 705.9 (one rail min and not 'unsafe')
		Guardrails per 705.10 (must exist and not 'unsafe')
Change Occ	Openings	1 hour for the stair enclosure
<b>Performance</b>		Detection Throughout Fire Area



# Existing Building Code Methodology Comparison

**Mercantile (pharmacy) changed to an Assembly use (Restaurant)**

**Existing Conditions**

- Unsprinklered
- NO Alarm
- Open Stair

M Use to A-3 Use		Upgrades required
<b>Prescriptive</b>	Change to Higher hazard	Sprinkler to code
	Change to Higher hazard	Alarm to code
	Change to Higher hazard	Exits, Means of Egress
<b>Work Area – Alt Level 3</b>	Change to Higher Hazard	Handrails per 705.9 (one rail min and not 'unsafe')
	Change to Higher Hazard	Guardrails per 705.10 ( must exist and not 'unsafe')
	Change Occ	1 hour for the stair enclosure
	Change to Higher Hazard	Sprinkler to Code Requirments
	Change to Higher Hazard	Alarm to Code Requirments
	Alt Level 1 -3	Thresholds, Door Swings, Exits
<b>Performance</b>	Chose to over detect	Detection Throughout Fire Area
		907 Compliant Alarm
		Enclose Stair

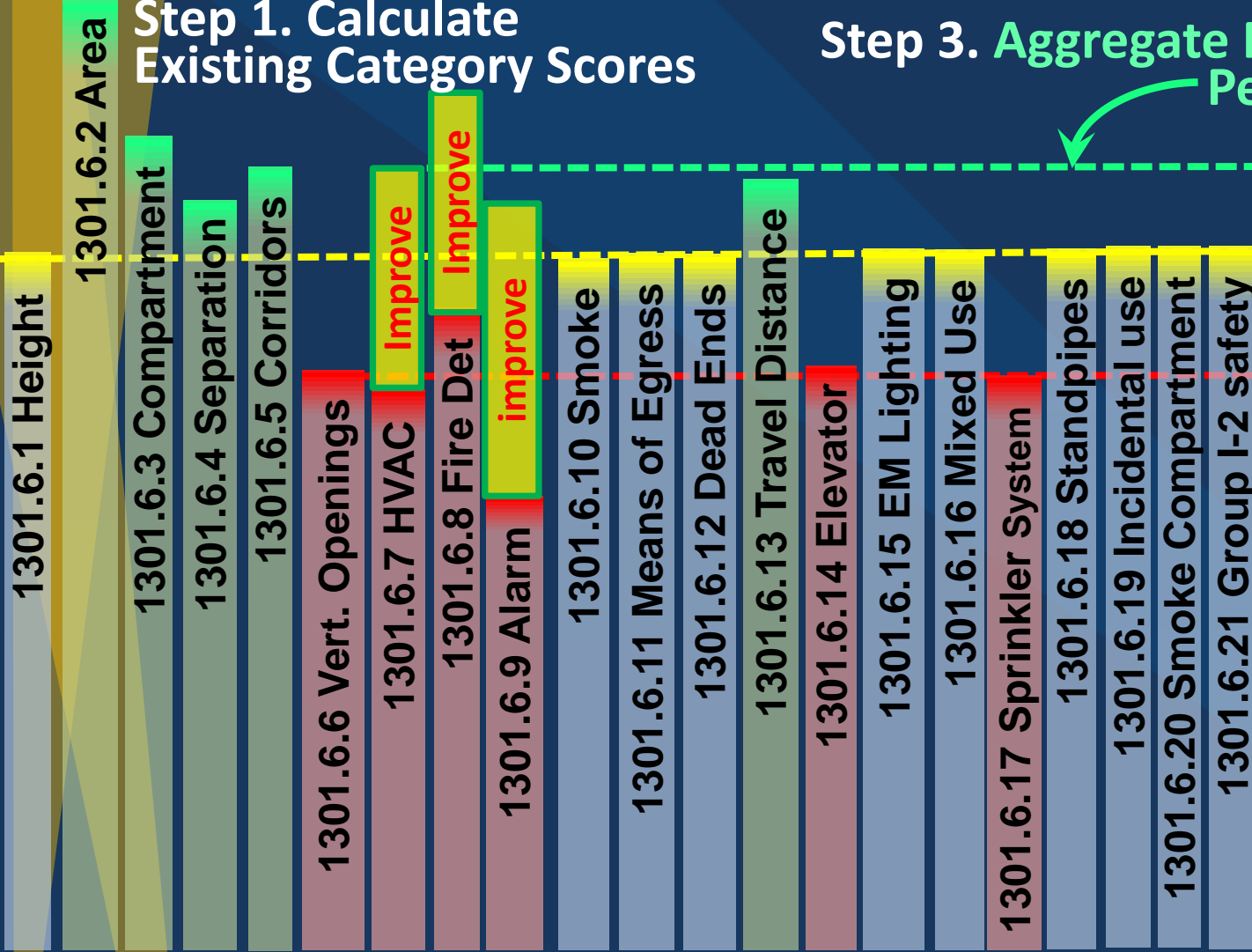




# 2018 IEBC Performance Chapter 13

**Step 1. Calculate Existing Category Scores**

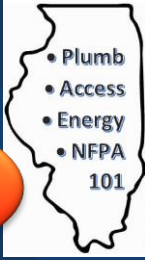
**Step 3. Aggregate Proposed Passing Performance Score**



**Minimum Performance 1308.1 Scores**  
(x3) Fire, Egress, Gen Safety

**Step 2. Aggregate Existing Building Score - Total Value Table 1307.1**

Plus IFC  
Chapter 11  
Compliance



# ICC - IEBC

## Performance CH. 13

	Category	Points	Comments			
A-2 per App		9.40				
A-2 w/HVAC alarms		9.40				
A-2 w/full detection		9.40				
0						
<b>3409.6.2 Building Area</b>						
					b	
Open Perimeter		305			<a href="#">FSS SCORE/Use</a>	
Total Perimeter		305			19	
Min width of open space		27			<b>Max Points / Use</b>	
					<b>9.50</b>	
Open Per Increase		67.50	%			
Sprinkler Increase		0	%			
	Floor	Floor	Floor	Floor		
	1	2	3	4		
Use	A-2					
<a href="#">Tabular Area</a>	9,500					
Allowable Area	15,913					
Actual Area	4,632				0	
	0.29	0.00	0.00	0.00		
<b>Points/Use/Flr</b>	<b>9.40</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	

Per 6.16 mixed occupancies.

**MIXED UN-SEPARATED**

If fire barriers between mixed uses are less than 1 hour then a section by section review of Chapter 34 shall be done for each use and the worst case scenario for each use/section of the 18 points shall be tabulated in the

# Benefitting Landmark Buildings



Use of IEBC Saves Historic Buildings and allows incremental reinvestments, allowing structures to live to fight another decade, leading to...

# Extensive Use

These alternate code compliance methods allow the code official to **NOT apply the full extent of the newer building codes** if the building can prove to be safe-enough through objective calculations.

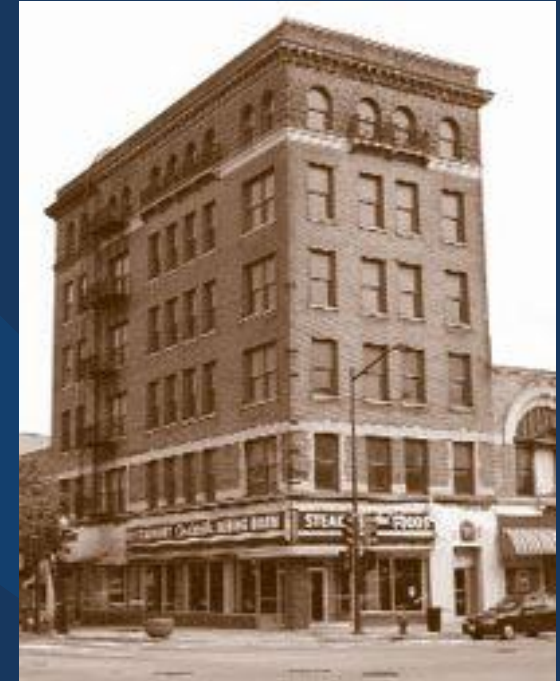
Since 1998 - Aurora has trained more than 100 architects how to prepare Existing Structures surveys.



Downtown Aurora



# Benefitting Landmark Buildings



Use IEBC tools to Create the Inertia to revive your historic downtown.

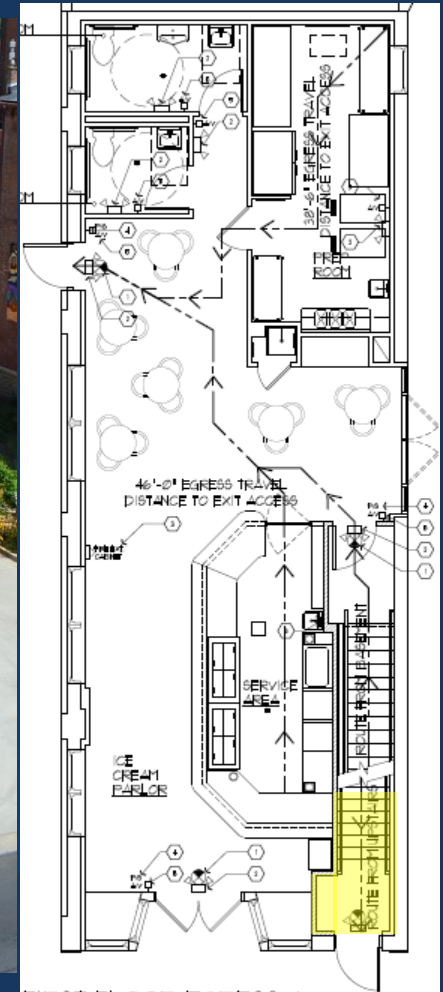


# Charlie's Creamery @ Aurora Silverplate Building

- Building Vacant for 31 Years on an important corner
- 3 stories tall
- Many times, deemed too small w/ 1,350 sf per floor
- Remodeled in 2019 for 3 units on upper 2 floors. Ice cream shop on the ground floor. Now back in for a wine bar in the basement accessed from below the patio on the right.



Key Building Architype

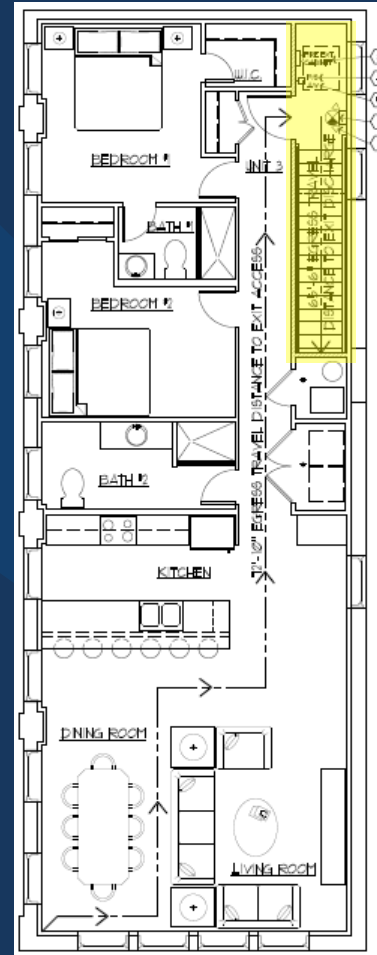


Ground Floor

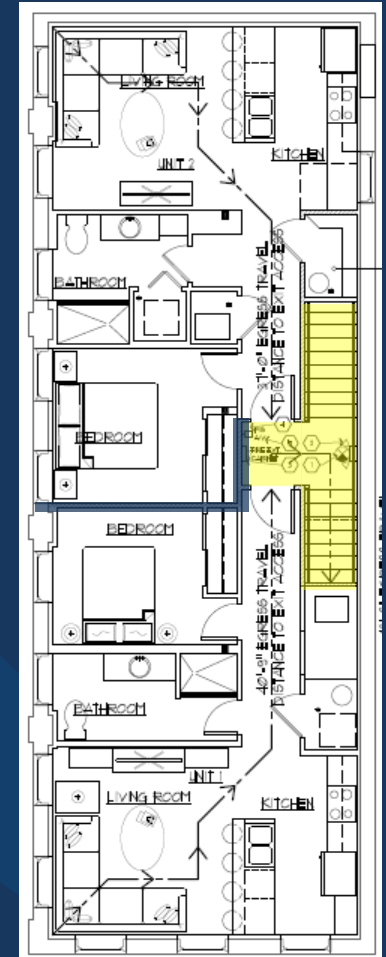
# Charlie's Creamery @ Aurora Silverplate Building



- Avoided a Sprinkler System with full detection and early warning alarm system
- Got by with one exit and a fire escape
- Two hour rated stair cut travel distances
- No elevator requirement



3<sup>rd</sup> Floor



2<sup>nd</sup> Floor



# Charlie's Creamery @ Aurora Silverplate Building



## 2<sup>nd</sup> Floor – North 1 bedroom

- Monthly rents for apartments more than doubled our downtown average at project inception.

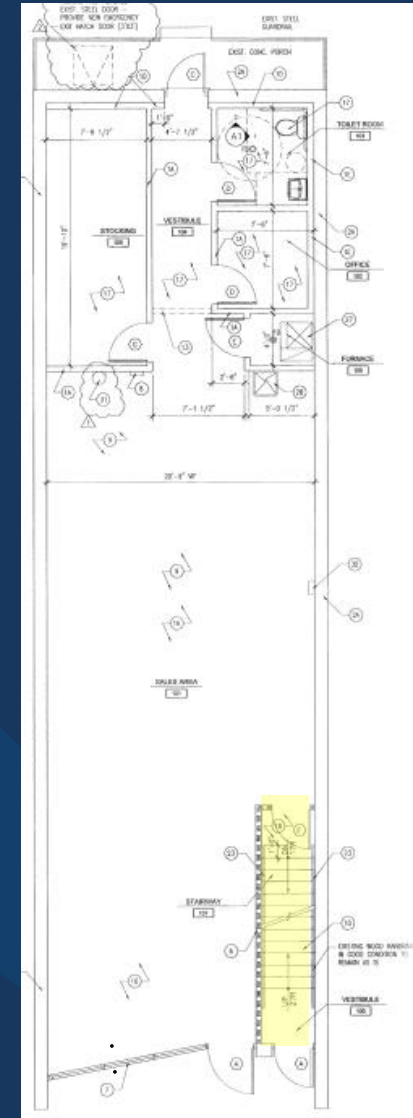
# Charlie's Creamery @ Aurora Silverplate Building



3<sup>rd</sup> Floor – 2 Bedroom

# Ziegler-Arenella @ 30 n Broadway

- 2<sup>nd</sup> and 3<sup>rd</sup> floors of Building Vacant for decades.
- 3 stories tall
- 1,700sf /Floor
- Remodeled in 2016 for 1 unit on each of the upper 2 floors and Retail/Office on first floor.

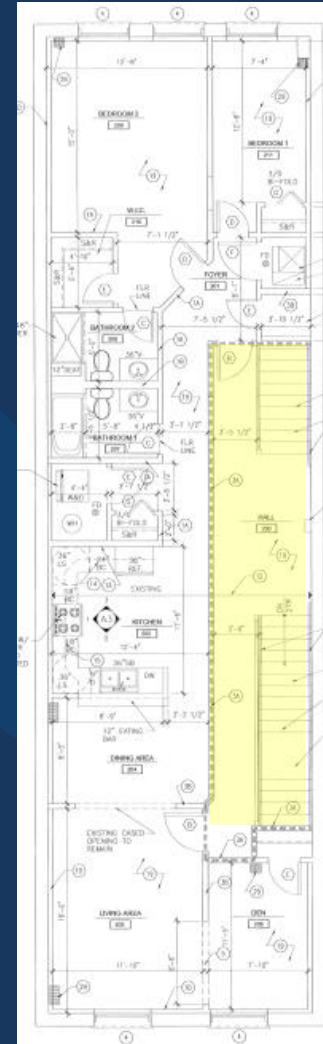


Ground Floor



# Ziegler-Arenella @ 30 n Broadway

- Avoided Sprinklers w/ Full Detection and Alarm system
- Passed with one exit stair
- No elevator
- 1 Apartment on 2<sup>nd</sup> and 1 on the 3<sup>rd</sup> floor
- Monthly rents for both apartment and for the retail have doubled our downtown average at project inception



2<sup>nd</sup> Floor



3<sup>rd</sup> Floor

- 3<sup>rd</sup> floor Unit Kitchen view east



- 3<sup>rd</sup> floor Unit Kitchen view west

- 3<sup>rd</sup> Floor 2-bedroom Unit - Monthly rents for both apartments and for the retail space have doubled our downtown average at project inception.

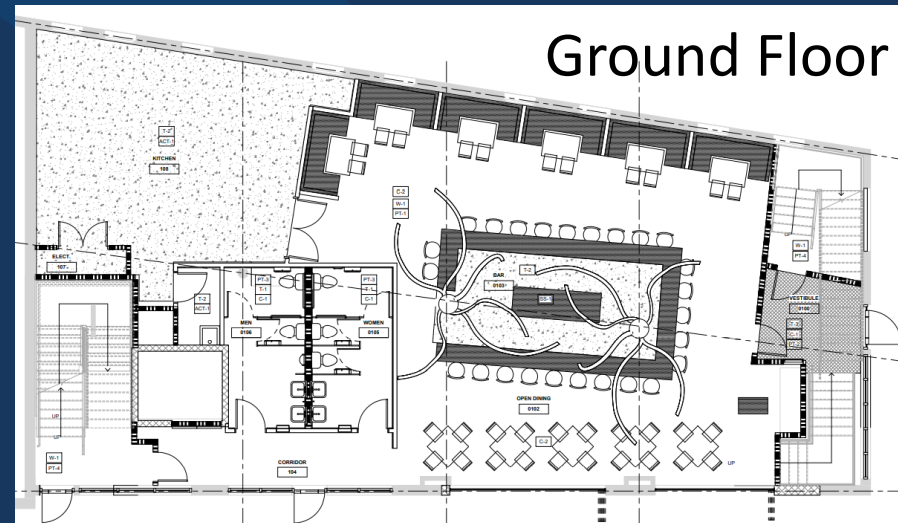


# MORA @ 43 e Galena Bl.

- City Owned - Building underutilized for many years.
  - Vacant 99-14, Not-for-profit use 14-19 .
  - Second floor Vacant 25 years last use an SRO.
- Important corner of Water Street mall. Steps from the Paramount Theater.
- 2 stories tall, large 2 story cantilever over the east branch of the Fox River.



2 story  
restaurant



# MORA @ 43 e Galena Bl.

- Large Cantilever over the Fox River creates about a quarter of this 5,200sf building's square footage.
- Building would be unlikely to be rebuilt should this one be demolished.



- Full detection, a compliant alarm system, 2-hour floor separation and stair enclosures eliminated the necessity for a sprinkler system for this 2-story assembly building.

# MORA @ 43 e Galena Bl.

- Restaurant owner walked away from an existing building code analysis meeting saying...

“ You just saved my project \$200 thousand dollars”





# PuR-POSe of Existing Building Codes

*“... the code review and approval process for existing structures is often fraught with (real or perceived) uncertainty. Further, when an applicant has not engaged a knowledgeable design professional, the process becomes considerably more difficult for all parties.”*

***Department of City Planning - City of Pittsburgh, Adaptive Reuse Building Code Study (1998).***

# What **Can** we do? To change NO to **YES**

- How can we **facilitate** the use these existing building tools to help redevelop your downtown?
  - How can we **eliminate** “real or perceived” **uncertainties**?
  - How can we help to **develop** a local bench of **knowledgeable** and **willing** design professionals?

# Secrets to Aurora's Success with Existing Building Codes

## Training, Promotion and Planning

- Develop/Sponsor IEBC Seminars for Architects
  - Request budget money for 2-day seminar bi-annually
  - Offer Continuing Education Credits if possible
  - Be willing to train other Muni's with open seats
- Engage your preservation agencies in promotion
  - Arm them with the knowledge to become ambassadors
- Promote use with Chamber of Commerce and Owners
  - Warn them about engaging a willing/knowledgeable architect
  - Make presentations about your successes
- Publish your historical code data and key code thresholds

# Secrets to Aurora's Success with Existing Building Codes

## Code Administration preparation

- Building Code Official and Fire Code Official receptivity
  - Need creative problem-solving approach
- Municipal Fire Dept. allows Building Dept. to admin codes
- Create a schematic design IEBC municipal permit process
  - Formalize the agreement prior to design development
  - Written acknowledgement from the Code Official(s)
- Waive/strike local amendments when using IEBC analysis
  - Would any of your local amendments hinder redevelopment?
- Perform Code Enforcement through IPMC and IFC ch. 11
  - Don't be complicit in decline and blight – enforce maintenance code
  - Be careful who is benefitting from your local incentives

# Secrets to Aurora's Success with Existing Building Codes

## Project specific assistance

- Discuss process with Architect prior to your IEBC Code analysis meeting with the owner
- IEBC code analysis schematic design meeting
  - Issue plan review comments for the Existing Building Code analysis
  - prior to any municipal Pre-issuance inspections
    - A walk-through will not answer any questions except what will meet the new building code.
- Embrace outside funding sources and Municipal Incentives
  - State tax incentives - River Edge Zone (IL) – HEAL (KS)
  - Leverage Historic Tax Credits
    - Aurora has been using Tax Credit proceeds as the collateral to payback front funded municipal low interest loans.
  - Consider 'micro' TIFs or rebate Municipal portion of prop/sales tax
    - Be careful who is benefitting from your local incentives



# FROM Unused/Blight to a doubling of average Rents...

Short of “other people’s money”

The Existing Building Code tools are some of the best ‘bang for your buck’ development tools to help improve the viability of private commercial financing for your downtown’s revival.

## Questions ?

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