2014

Egg Industry Issues Forum

PREPARING FOR THE FUTURE!

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HEN HOUSE CONVERSION:
What comes with it?

Establishing criteria

- What is the goal ?
  - Our goal in this presentation today is to address renovation and upgrading of existing High rise houses.
- What is your Long Term Goal ?

Option 1 - Remodel with Higher Density A-frame Cages

Option 2 – Remodel to Enrichable

Option 2a -Remodel to Enriched

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Option 3-Back to the future…

Option 3-Convert to Aviary Cage Free

What is The Industry thinking?

Option 1 - Remodel with Higher Density A-frame Cages

Very little to no interest

Option 2- Remodel to Enrichable ,or Enriched

Currently top

Option 3- Change to Aviary Cage Free

Gaining momentum

It's All About SPACE!

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It's All About SPACE!

Working with the SPACE available to MAXIMIZE efficient use and COST of converting older/new layer houses.

It’s About SPACE!

- **Bird density at 67in² - 116in² - 124in²**
- **Enrichable or Enriched Colony Housing**
- **Cage Free – Aviary – Housing**

Options

- Keep main structure
- Remove all interior cage equipment, floor joist, beams and support post
- Install new equipment, Enrichable, Enriched, or Aviary cage free
- Upgrade electrical, and ventilation
- Sounds simple but is it:

Photo of High-Rise barn

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Photo of High-Rise barn

Photo of High-Rise barn

Photo of High-Rise barn

Photo of High-Rise barn

What comes with renovation

- Structure engineering changes when cage support beams are removed to accommodate new system
- Hidden Issues within the walls that is not visible at the surface
- Concrete floor condition able to support the new system
- Dimensions of the building able to accommodate a sufficient amount of hens to make the renovation economical.

Demolition of all interior equipment and support beams requires reinforcement of side walls to withstand wind sheer

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Add Buttress supports to exterior

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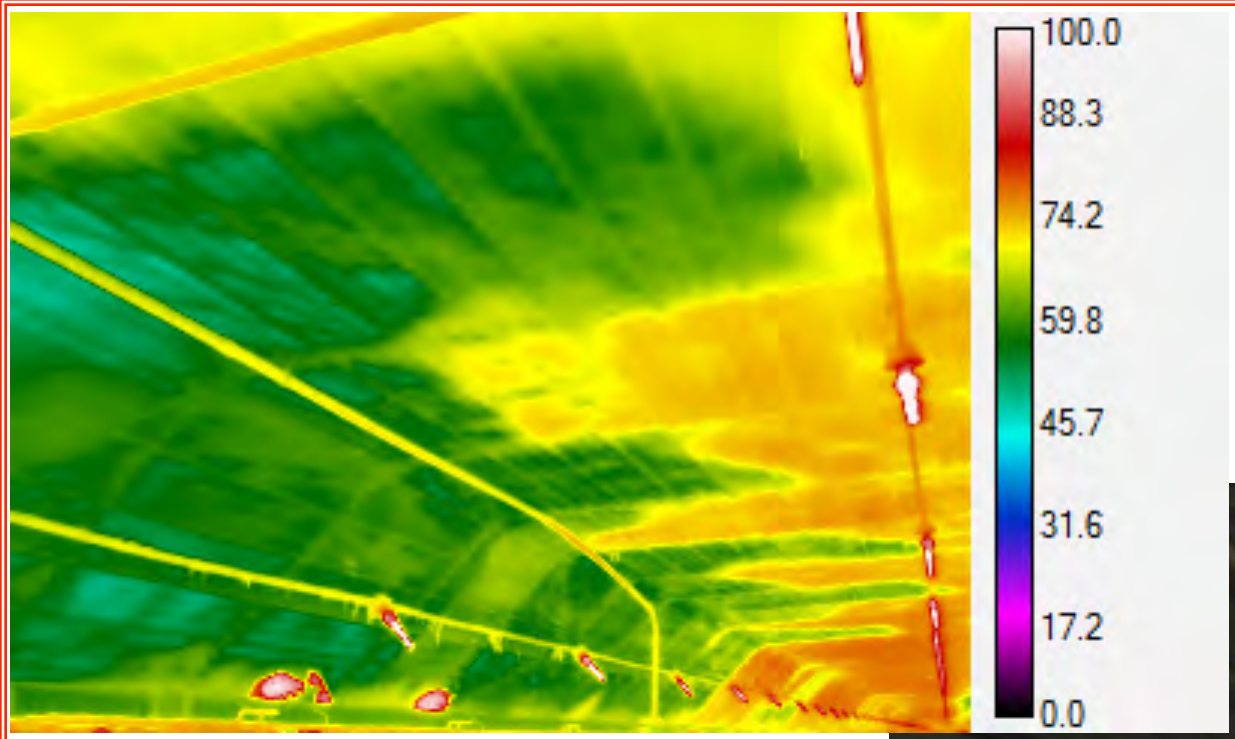
Example to possibly save the stability of the structure

Concrete floor Damage

Insect Damage



Lack of insulation

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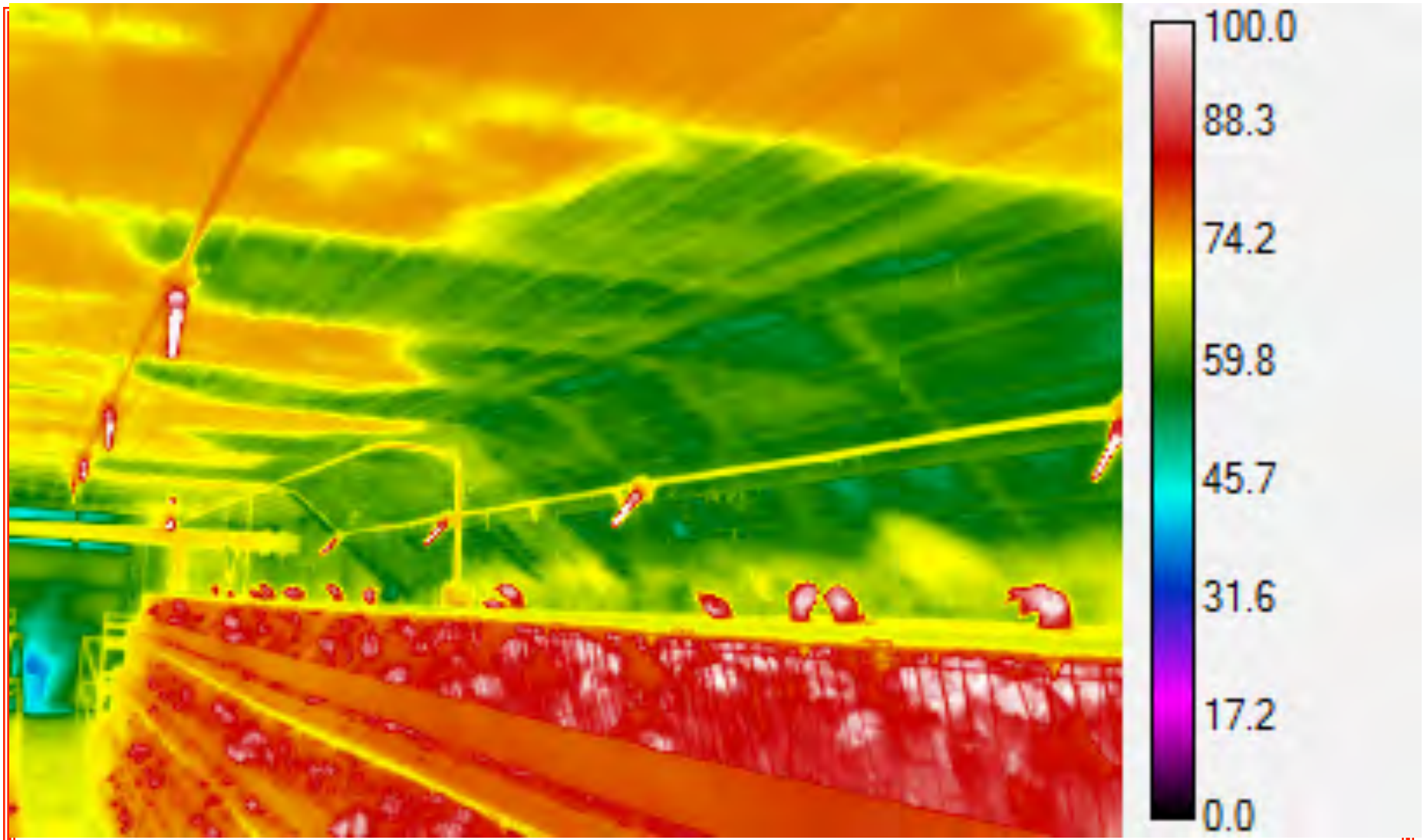
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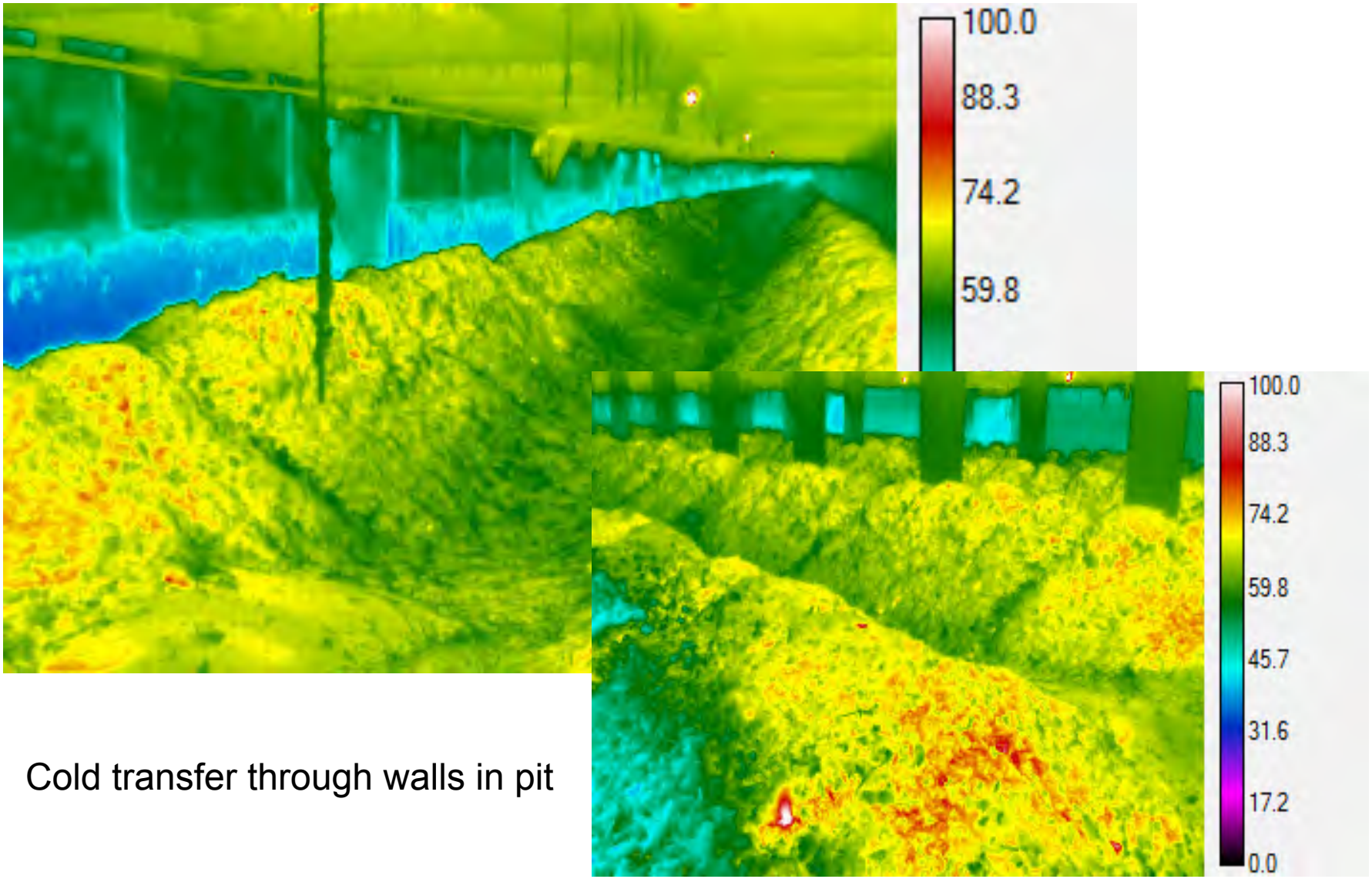
88.3
74.2
59.8
45.7
31.6
17.2
0.0



Cold transfer through walls in pit

Strip walls and reinsulate

Addition of fans

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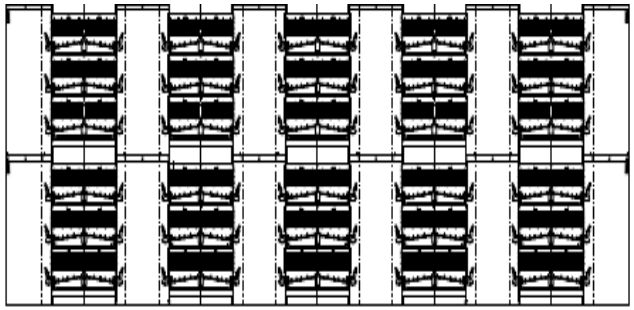
After Remodel

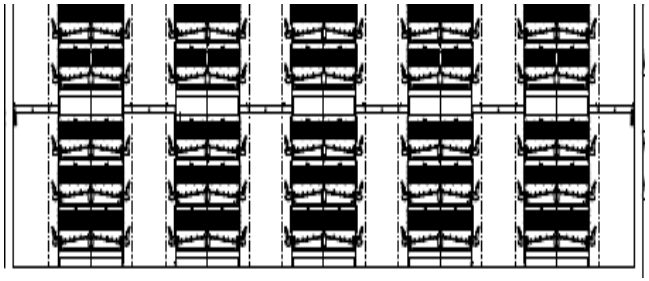
Before Remodel

After Remodel

Option 2- Remodel to Enrichable ,or Enriched

- How does remodel affect bird capacity
- We looked at two options for a 50 ft. x 500 ft. house
- 6 tier , 3x3 requires 18 ft. sidewall
- 5 tier , 3x2 requires 16 ft. sidewall





6 Tier Conversion

A High-Rise Manure Pit house holding 100,000 hens at todays density standard of 67 in²

- **Convert that house to Enrichable at 67 in² making it a 3 + 3 = 6Tier.**
  - **200,000 hens**
  - **You doubled the bird capacity in the same building foot print.**

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5 Tier Conversion

A High-Rise Manure Pit house holding 100,000 hens at todays density standard of 67 in²

- **Convert that house to Enrichable at 67 in² making it a 3 + 2 = 5 Tier.**
  - **166,667 hens**
  - **You increased the bird numbers in this house by 66%.**

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6 Tier Conversion

A High-Rise Manure Pit house holding 100,000 hens at todays density standard of 67 in²

- **At the 116 in² House now holds 60,000 hens – 40% reduction**
- **Convert that house to Enrichable at 116 in² making it a 3 + 3 = 6Tier**
  - **200,000 less 40% = 120,000 hens**
  - **You still increased the capacity above the original hen numbers of 100,000**

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5 Tier Conversion

A High-Rise Manure Pit house holding 100,000 hens at todays density standard of 67 in²

- **At the 116 in² House now holds 60,000 hens – 40% reduction**
- **Convert that house to Enrichable at 116 in² making it a 3 + 2 = 5 Tier**
  - **166,667 less 40% = 100,000 hens**
  - **You maintained the same level of birds in house after the conversion.**

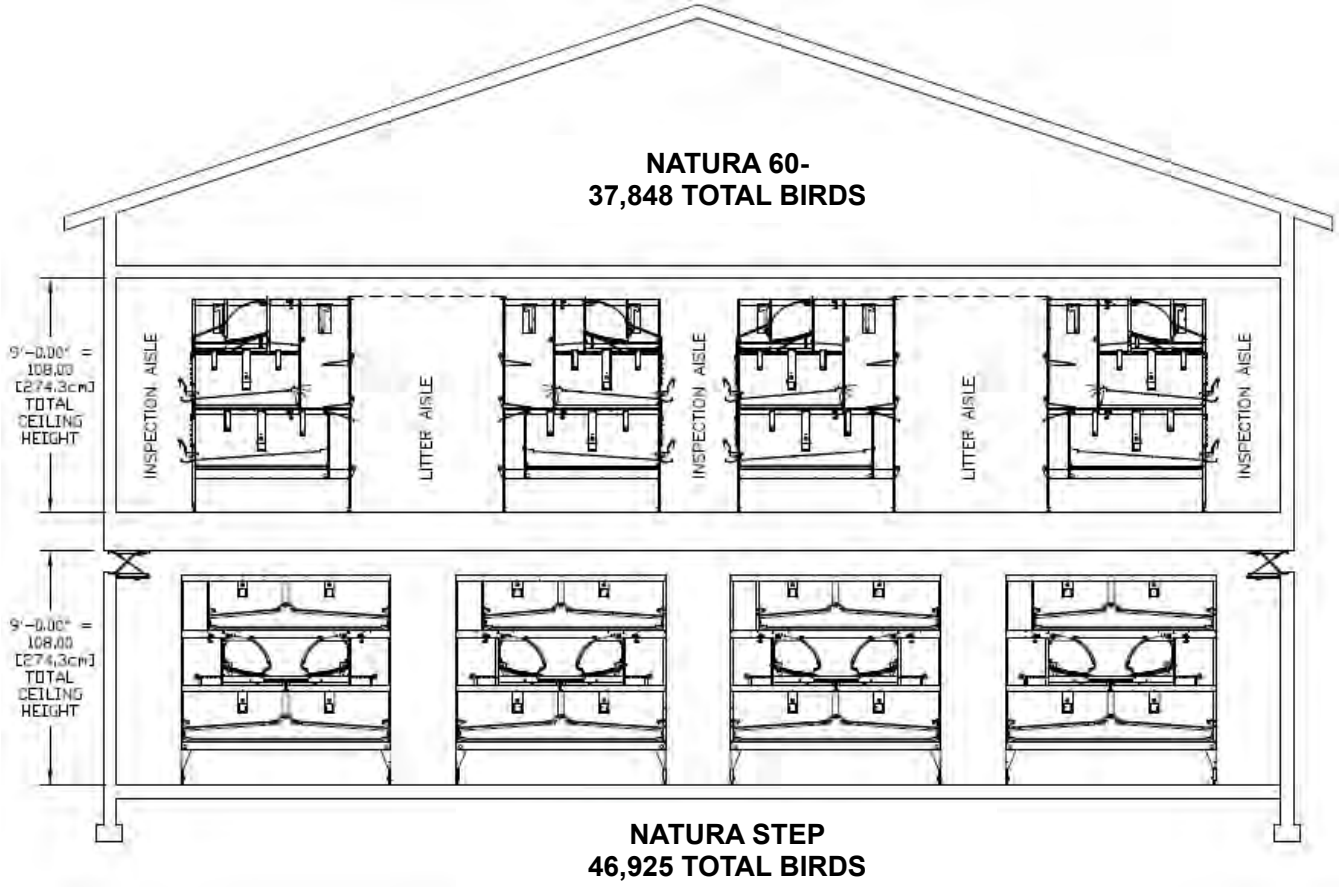
Projected conversion cost per bird includes demo, renovation, equipment, electrical, ventilation, manure storage

- **Option 2 – 6 tier**
  - 67 in²- 200,000 hens = $15.77 per bird +/- $2.00
  - 116 in² - 120,000 hens = $23.34 per bird +/- $3.00
- **Option 2 – 5 tier**
  - 67 in²- 166,667 hens = $16.55 per bird +/- $ 2.00
  - 116 in² - 100,000 hens = $24.50 per bird +/- $3.00

Option 3- Convert to Aviary Cage Free

- 54 ft. wide x 503 ft. x 19 ft. total ceiling height
- We looked at Two different systems
- Each system requires a minimum of 9 ft. ceiling height
- If structure has a height less than 19 ft. it would only be able to accommodate 1 system or 50% less birds.

Option 3 – convert to Aviary Cage Free



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Projected conversion cost per bird includes demo, renovation, equipment, electrical, ventilation, manure storage

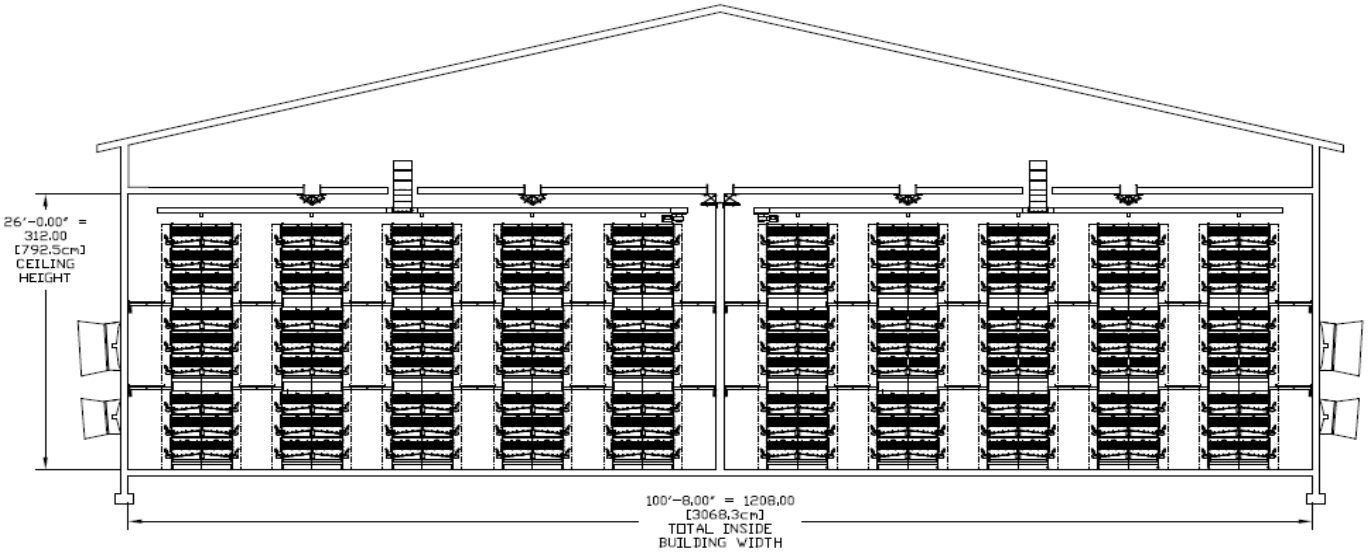
54 ft. x 503 ft.

1.2 ft.^{2} per bird

- **Option 3 – 2 floor**
  - **» 75,696 to 93,850 birds**
  - **» $25.58 to 29.38 bird +/- $3.00**

- **<u>Option 3 – single floor</u>**
  - **» 38,983 to 46,925 birds**
  - **» $29.35 to $32.34 bird +/- $3.00**

Tear down Two High rise replace with New Construction



102 Ft. x 426 Ft. x 26 Ft Height

124 in² = 200,880 birds

116 in² = 214,734 birds

67 in² = 371,777 birds

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Option 3 -Before Demolition

Demolition

After Demolition

Option 3- After new construction

Demolition of Two high Rise capacity 100,000,replace with 1 house New Construction and Manure storage

- Enrichable **67 in² - 371,776 birds- $ 14.87 per bird**
- Enrichable **116 in² - 214,734 birds- $ 25.74 per bird**

- Enriched **116 in² - 214,734 birds- $ 27.17 per bird**
- Enriched **124 in² - 200,880 birds - $ 29.04 per bird**

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CONVERT or Not CONVERT AN OLD HOUSE

- **Building permits – value of the permit and how you can utilize it.**
- **More difficult in todays World to gain a permit and it takes more time to gain approval.**
- **Cost of remodeling old housing with new Enrichable equipment averages $16 to $24 per bird.**
- **Cost of building new housing for Enrichable with new equipment averages $15 to $25 per bird.**

Acknowledgments

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Big Dutchman

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CHORE-TIME

THANK YOU

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