

NC Rehab Code Case Study

Cheerwine Building

January 17, 2002; rev 4/12/02

PART A: Project Data and Classification

1. Project name & location

Renovation of the Cheerwine Building, 322 East Council St., Salisbury, NC

2. Project description

The building footprint is relatively small; 7500 sq ft on the 1st and 2nd floor, plus a 7000 sq ft 1 story building to the east. There is a 3750 sq ft partial basement under the 2 story portion. Construction is IBC Type IV (SBC Type III, heavy timber) for both structures.

The original use was “f” for factory soda production, so the existing plan is open factory space, with a limited amount of existing partitions. The proposed plan use calls for:

- 5 commercial office spaces on the West 1st floor
- 5 residential units on the West 2nd floor
- parking and storage in the East structure

All framing, systems and finish will be new.

The Cheerwine building is listed as a contributing building on the National Register of Historic Places.

3. Plan availability

Both existing and proposed plans are attached.

4. Scope declaration and justification

The work is extensive, involving radical plan change by subdividing the open space into office and residential space. In doing so, inputting means of egress components and other life safety features is an integral part of the work. Occupancy permits will be required for the new office and residential units

The proposed scope is CHANGE OF USE and RECONSTRUCTION for a HISTORIC building.

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PART B: NC Rehab Code Requirements

1. For Change of Use

- proposed change of use is from F-2 (low hazard) to a mix of B, R-2 and S-2 (low hazard)
- Use group hazard is equal or lesser
 - S-2 Area must comply with IBC 406
- Means of egress hazard is greater for R-2, and equal or lesser for B and S-2
 - Comply with egress requirements stipulated in 1.31c.2
 - Vertical opening protection required: 1.31c.4 & 1.31d
 - Operable window requirements for R-2 apply: 1.31c.6
- Height and Area hazard is greater for B & R-2, and equal for S-2
 - Show compliance with height and area of IBC T503
 - For non-residential use located below residential, provide separation between uses and at residential exits: 1.31e.3i.4
 - If each use is separated by fire walls per IBC T601, than uses may be considered separate buildings.
- Exterior wall exposure hazard is equal or lesser: no change required
- Fire suppression hazard is greater for R-2, and equal or lesser for B and S-2
 - Provide fire suppression per IBC 903.2.8 (not 3 stories or greater than 16 units)
 - If use separation complies with IBC T 302.2.2, fire suppression only required in R-2
 - Alarms required
 - In B per IBC 907.2.2 (occ less than 100 above LED)
 - In R-2 per 907.2.9 (not 3 stories or greater than 16 units)
- Structural load categories are equal or lesser no change required

2. For Mixed Use

- Separation requirements apply, but also covered by 1.31 above: 1.2b
- Must have smoke detection in commercial, interconnected with residential units: 1.29c

3. For Historic

- Requests for variation considered: 1.33a.2
- Original or replica materials allowed: 1.33b.1
- Exterior walls not required to be modified to meet fire resistive wall constr: 1.33b.2
- Existing lath and plaster may substitute for 1 hr fire resistive constr: 1.33b.3
- Ext'g egress door opngs and corridors may be approved if enough width for a person: 1.33b.5
- Ext'g front or main egress door need not swing in exit direction if less than 50 occ: 1.33b.6
- Ext'g transoms may remain: 1.33b.7
- Ext'g interior finishes may remain if historic: 1.33b.8
- Ext'g stairways may retain tread, riser and width dimensions: 1.33b.9
 - enclosure requirement omitted at 1st and 2nd floor
 - only smoke limiting constr req'd
- existing handrails may remain
- existing ceiling heights may remain

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3. Reconstruction (unless excepted by 1.33 historic)

3a. General requirements

- comply with products and practices: 1.7d & 1.7e. 1, 1.7e.2, 1.7e.6, 1.7e.7
 - comply with electrical requirements of 1.7e.8
 - minimum 7 ft ceiling ht in R-2 habitable space: 1.7e.9
 -
- accessibility requirements apply to:
 - new doors: 1.7e.3
 - new entry steps: 1.7e.4
- All new materials comply with 1.8 materials and methods
 - Specific sleeping room window requirements: 1.7f.2
- All new building elements comply with 1.9
 - New floor openings comply with IBC 707
 - New door openings comply with IBC1003.3 & 714
 - New openings in fire rated assemblies protected per IBC 711
 - New exit discharge complies with IBC 1005.3
 - New exit stairs comply with IBC 1005.3
 - new corridors comply with IBC 1004.3.2.1, 1004.3.2.3, 1004.3.2.4, and 1004.3.2.5.
 - New windows in R use sleeping rooms per 1.9a.16 requirements
 - New tenant separation requirements per IBC 708
 - New electrical equipment must comply with 1.9a.18
- Comply with Basic or Supplemental requirements for that use
- Primary function areas per NC Accessibility Code to comply, within limits of 20% disproportionality: 1.7j

3b. Basic and Supplemental Use requirements for all uses from 1.11

- Means of egress capacity per 1.11 Table 1
- Ext'g interior finishes must have min flame spread of I in exits and II in exit access: Table 2
- Windowless stories: from 1.11A.c, the existing basement has no work involved
 - But if work is proposed in over 50% of the space, sprinklers would be required: 1.30c
 - If less than 3,000 sf, may use fire alarm in lieu of sprinklers: 1.30c.6
 - If 3,000-10,000 sf, may use supervised limited area sprinkler on domestic water: 1.30c.7

3c. Business use Basic Requirements from 1.17

- 2 exits required
- exit capacity per 1.11
- max 35ft existing dead end
- means of egress lighting required at 1 fc
- exit signs required
- handrails required one side
- provide guards where elev drop is greater than 30"
- vertical opening protection of 30 minute rating required
- reinforce deficient/unsound structural elements
- Plumbing facility requirements per 1.17k: 1 unisex wc, 1 lav, 1dwc, 1 service sink
 - Ventilate per 1.17L
- Exposed framing shall comply with firestop/draftstop req'ts of IBC 716

- Supplemental Requirements per 1.17A:

- Manual alarm required

3d. Residential R-2 use Basic Requirements from 1.26

- Single exit permitted if max 2 stories, floors max 16ft above grade and max 4 units. 1.26a.7
 - Min 1 hour exit construction
 - DU window requirements
- Sleeping room emergency egress windows required per 1.26b
- DU corridor doors must be 1 3/8" sc with closers
- exit capacity per 1.11
- max 35ft existing dead end
- means of egress lighting required at 1 fc
- exit signs required
- handrails required one side
- provide guards where elev drop is greater than 30"
- vertical opening protection of 30 minute rating required, unless building is sprinkled
- reinforce deficient/unsound structural elements
- electrical requirements per 1.26n
- Plumbing fixture requirements IPC T407
- Mechanical requirements per 1.26p
- NC Accessibility Code applies
- Communicating unit attic space must have 1 hour sep
- Exposed framing shall comply with firestop/draftstop req'ts of IBC 716
- R-2 Supplemental Requirements per 1.26A:
- Smoke detection required in units per IBC

3e. Storage S-2 use Basic Requirements from 1.28

- Single exit permitted if single story at LED, max 30 occ and max 100 travel distance
- Exit capacity per 1.11
- means of egress lighting required at 1 fc
- exit signs required
- reinforce deficient/unsound structural elements
- Plumbing facility requirements per 1.28k: 1 unisex wc, 1 lav, 1dwc, 1 service sink
 - Ventilate per 1.28k.1
- Exposed framing shall comply with firestop/draftstop req'ts of IBC 716
- Supplemental Requirements per 1.28A:
- None

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