

# Brigham and Women's Hospital's Experience with Nora Rubber Flooring



**BWH Real Estate & Facilities**

75 Francis St, Boston MA 02115



# The BWH campus

*Located in the  
Longwood Medical  
Area of Boston*

*Campus has 19  
owned buildings  
and 2.4million sf*

*The east side  
dates to 1912, the  
newer west side  
has 2008 Shapiro  
Cardiovascular  
Center*



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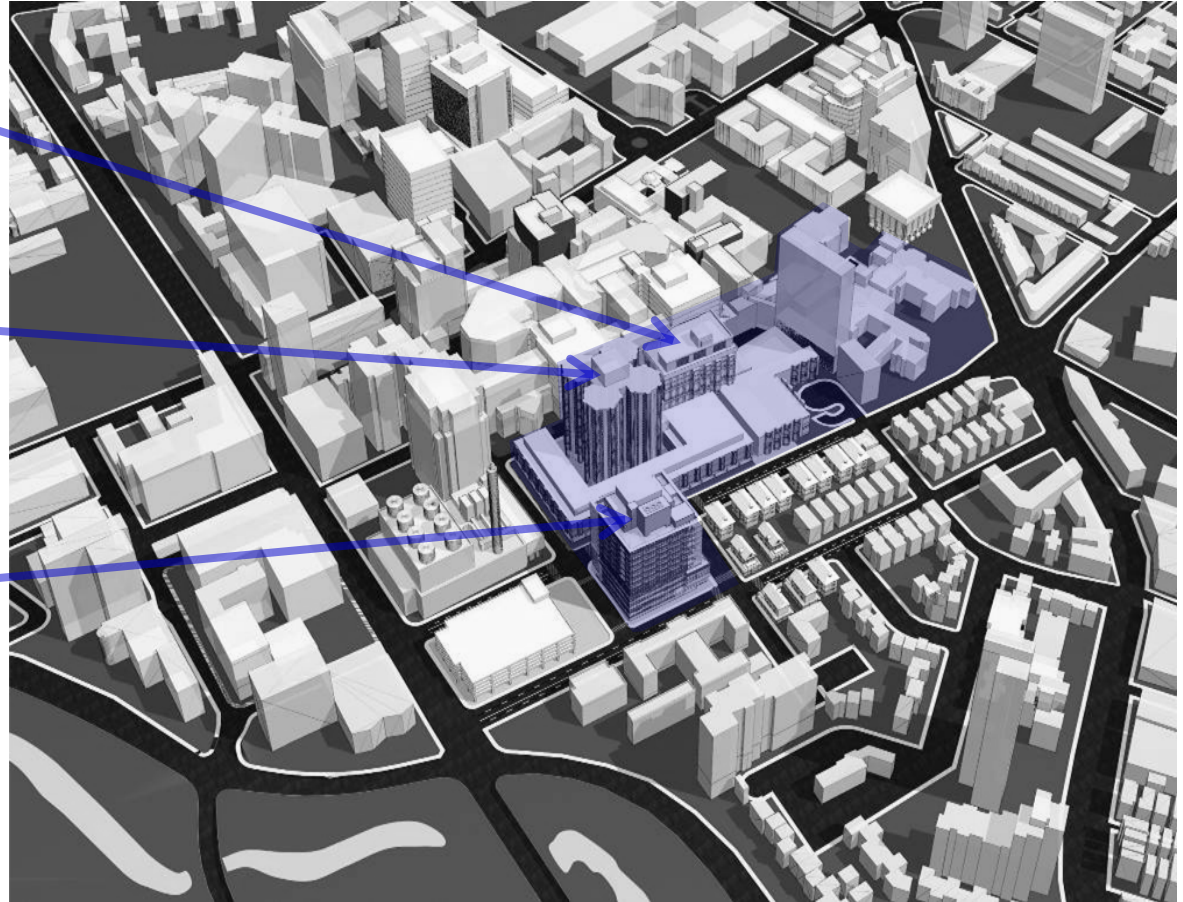
**PARTNERS**  
HEALTHCARE SYSTEM

# In patient bed distribution

**Connors Center  
(women's health)**

**Bed Tower  
(all services)**

**Shapiro Center  
(cardiology &  
vascular surgery)**



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# Clinical components

- 434 exam rooms
- 754,000 patient visits
- Level 1 Trauma Center 54,000 visits
- 41,000 discharges
- 777 beds (90%+ avg. census)
- 9,900 births
- Increasing to 43 Ors, 31,000 procedures



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# Environmental health - why we care about flooring

- Awareness traces to 1990 emphasis on universal precautions
- Sensitivity to latex led to intensive effort to test and eradicate latex powder in 1993
- Focused expanded to antibiotics, VOCs and air- born particles
- JCAHO expanded its environment of care to include active construction in 2000



# Evolving to a rubber based standard

- Relied heavily on vinyl sheet and vinyl composite tile as standard resilient material in 1980s
- Architect first suggested Nora product for an OR in 1999
- Used for stairwells in 2001
- First patient floor application in 2003



# What do we look for?

- Attractive appearance, variety
- Durable, non-slip finish
- Long lasting (15 years)
- Easier to maintain, lower cost
- Very limited off-gassing
- Meets or exceeds infection control requirement
- Comfortable and quiet
- Lower life cycle impacts



# What are the benefits?

- A win for environmental services
  - Payback assumption is 3-4 years
    - No burnishing (2 x per week) and no stripping/refinishing (at six-months)
    - Labor saving @ 1 FTE per 50,000 sf
    - Equipment saving @ \$.08/sf
- Bed in-service benefit – less down time
- Better for the patient – low odor impacts
- Staff love it – its more comfortable
- Better for the environment than vinyl



# What about the costs?

- First costs are higher
  - VCT cost is \$2.75 - \$3.50/sf
  - Rubber cost is \$10 - \$13/sf
- Cost driver is floor leveling and precise application (Nora system)
- Disposal costs same and other flooring materials



# Widespread application

- Approaching 500 thousand square feet
- Variety of installations:
  - Main circulation
  - Operating rooms
  - Emergency room
  - In patient floors
  - Out patient clinics
  - Cafeteria
  - Stairwells



# Applications – Patient Floors

Typical nurse station  
on floors 6 through 10 -  
Shapiro  
Cardiovascular  
Center



# Specialty ORs

One of 16 operating  
rooms -  
Shapiro  
Cardiovascular  
Center



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# Patient Rooms

One of 136 universal  
patient rooms -  
Shapiro  
Cardiovascular  
Center



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# What can we conclude?

- It's become our standard for flooring in all but the high finish areas
- Attractive with a variety, colors and finishes
- More difficult to install but easier to maintain
- Staff love it for comfort and quiet
- We think it pays for itself in 3-4 years
- Life-cycle impacts are fewer than vinyl

